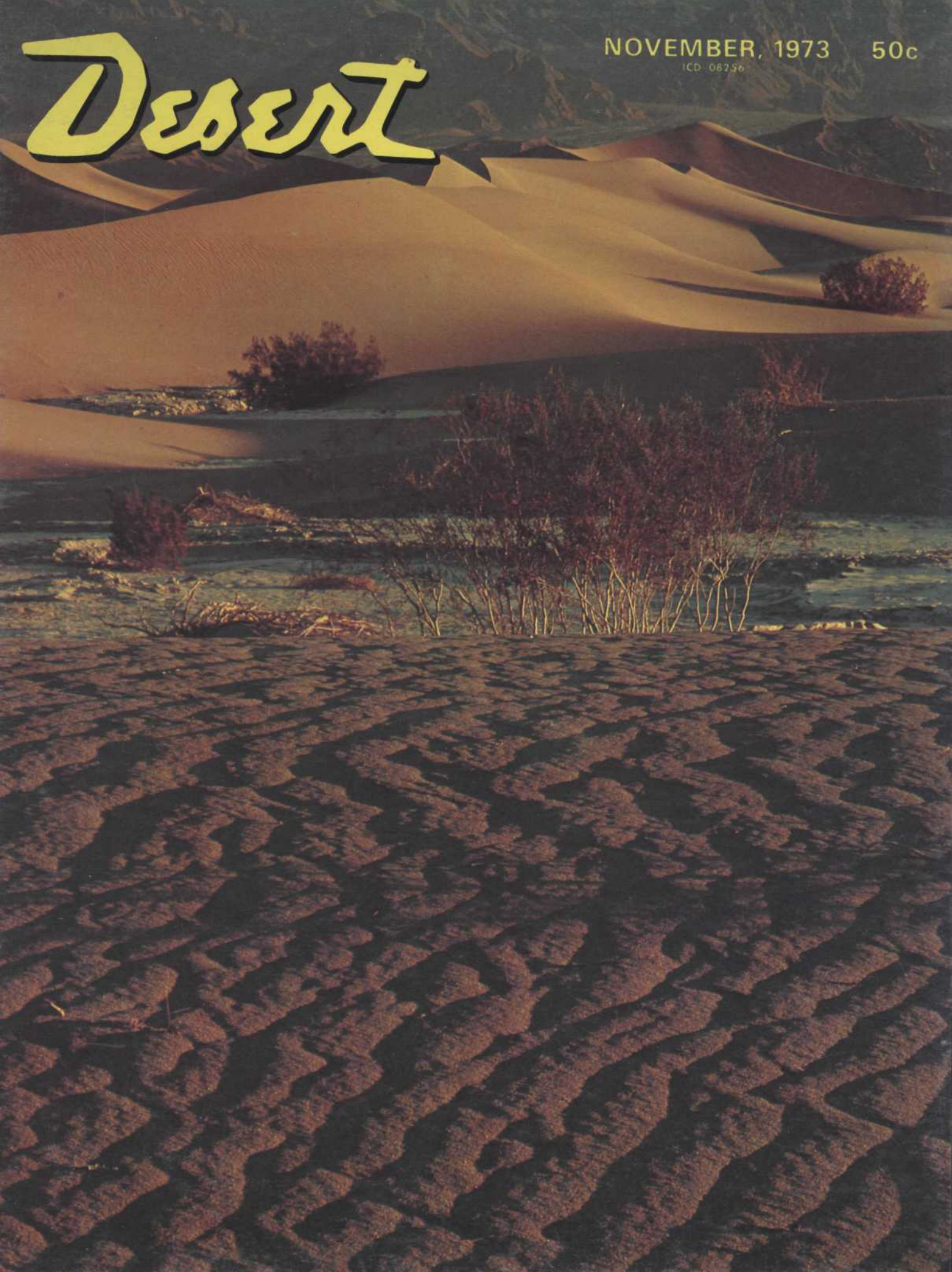


Desert

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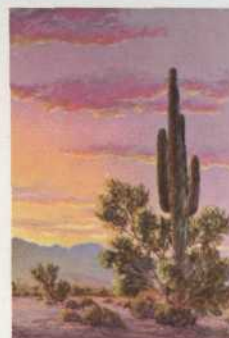
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T738 Take Time To See (24 line poem)—Merry Christmas and Happy New Year—Lowdermilk



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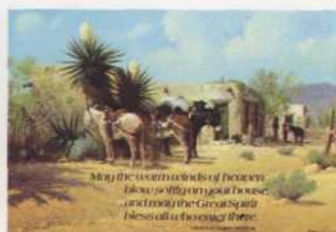
T823 Gambel's Quail Family—May the Peace and Joy of Christmas be with you, etc.—Van Howd



T748 The Warm Winds of Heaven—Peace and Good Will at Christmas, etc.—Lewis



T814 The Lights of Friendship Glow—Merry Christmas!—Nicles



T762 "May the Great Spirit bless all who enter"—With Best Wishes for Christmas, etc.—Harvey



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T763 A Christmas message of the West—Merry Christmas—Bender

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NAME AND BRAND	6.00	8.25	10.90	13.50	18.25	22.50	26.75	31.25	40.25	58.25	92.25
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AS NOTED in the August issue, the Bureau of Land Management has put the finishing touches on its Desert Plan for the operation of Off-Road Vehicles. This preliminary draft will be sent on to Sacramento for approval by Russ Penney, State Director for the BLM.

This plan was not an overnight, slap-together, but a carefully scrutinized plan to allow the most availability to the many special interest groups and yet restrict the areas most susceptible to major damage by severe overuse. Those who have not been to the desert areas on weekends simply do not realize the crush of people and vehicles that congregate in certain areas.

Data was gathered from many organizations, clubs, etc., and fed into the Riverside office where Neil Pfulb, director of the Desert Plan, and his staff analyzed and estimated use of the desert area.

The culmination of this small staffs' effort is lauded by this magazine as being an earnest step in the right direction. This type of land-use restriction has never been done before, there were no standards to follow and there were pressures from each special interest group to keep things the way that was best for them.

So now we have a starting point. Some areas are closed, some restricted and the first step has been taken. The accompanying photograph is a graphic example of why desert management is necessary. In the photo it clearly shows a "No Trespass" sign. Also in the photo are a num-

A Peek in the Publisher's Poke

ber of vehicle owners who just don't give a damn about that sign. It is scenes like this, multiplied over and over, that have been one of the major reasons for controls. People do not respect other people's property, their rights, or the laws of the land.

What a fantasy world it must be to so many. Just doing what they want, where they want and when they want!

Controls are necessary and so is respect. Respect is defined in the dictionary thusly: "To view or consider with some degree of reverence." Our desert deserves respect. It's about time the wheel began to turn the other way. If it doesn't, one thing is certain. We won't have the desert to kick around any more.

William Kuykendall



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Volume 36, Number 11 NOVEMBER, 1973

CONTENTS

FEATURES

HUNGRY BILL'S HIDEAWAY	8	Betty Shannon
DEATH VALLEY GHOSTS	12	Stanley Paher
TECOPA COUNTRY	16	Mary Frances Strong
DESERT NIGHT LIZARD	20	K. L. Boynton
AN INCIDENT OF MEMORY	24	Helen Walker
THE LONELIEST ROAD	28	Russ Leadabrand
PAGES OF THE PAST	34	Tom Baugh
DEATH VALLEY ENCAMPMENT	36	Program of Events
OLDEST HOUSE IN AMERICA	38	Grover Brinkman

DEPARTMENTS

PEEK IN THE PUBLISHER'S POKE	4	William Knyvett
BOOKS FOR DESERT READERS	7	Book Reviews
DESERT LIFE	30	Hans Baerwald
RAMBLING ON ROCKS	40	Glenn and Martha Vargas
LETTERS TO THE EDITOR	45	Reader's Comments
CALENDAR OF WESTERN EVENTS	45	Club Activities



THE COVER:

Diadem of sand sunrise on Mesquite Flat dunes, Death Valley National Monument, Calif. Photo by David Muench, Santa Barbara, California.

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Desert Magazine Book Shop

100 HIKING TRAILS by Don and Roberta Lowe. There are two separate books: one on trails in Northern California and the other in Southern California. Both have 100 trips (both easy and rugged) described in detail. Both books are 225 pages, heavy paperback, \$5.95 each. When ordering state whether you want NORTHERN or SOUTHERN Hiking Trails.

LOAFING ALONG DEATH VALLEY TRAILS by William Caruthers. Author Caruthers was a newspaper man and a ghost writer for early movie stars, politicians and industrialists. He "slowed down" long enough to move to Death Valley and there wrote his on-the-spot story that will take you through the quest for gold on the deserts of California and Nevada. Hardcover, old photos, 187 pages, \$4.25.

CALIFORNIA-NEVADA GHOST TOWN ATLAS and SOUTHWESTERN GHOST TOWN ATLAS by Robert Neil Johnson. These atlases are excellent do-it-yourself guides to lead you back to scenes and places of the early West. Some photos and many detailed maps with legends and bright, detailed descriptions of what you will see, also mileage and highway designations. Heavy paperback, each 48 pages, \$2.00 each.

MINES OF JULIAN by Helen Ellsberg. The towns of Julian and Banner located above the Anza-Borrego State Park in San Diego County, are little known for their mining history. It did happen, though, some 20 years after the Mother Lode rush. The author's remarkable ability to glean this information from old-timers and digging into newspapers and old records makes this a skillfully blended story. Paperback, historic photographs, reference material, 68 pages, \$1.95.

THE ROCKS BEGIN TO SPEAK by LaVan Martin-eau. The author tells how his interest in rock writing led to years of study and how he has learned that many—especially the complex petroglyphs—are historical accounts of actual events. Hardcover, well illustrated, glossary, bibliography, 210 pages, \$8.95.

TEMALPAKH by Lowell John Bean and Katherine Siva Saubel. Temalpakh means "from the earth," in Cahuilla, and covers the many uses of plants used for food, medicine, rituals and those used in the manufacturing of baskets, sandals, hunting tools; and plants used for dwellings. Makes for a better understanding of environmental and cultural relationships. Well illustrated, 225 pages, hardcover, \$10.00; paperback, \$6.50.

FOUR WHEEL DRIVE HANDBOOK by James T. Crow and Cameron Warren. Packed into this volume is material gathered from actual experience and presented in a detailed manner so it can easily be followed and understood. Highly recommended for anyone interested in back country driving. Paperback, illustrated 96 pages, \$3.95.

ARIZONA by David Muench. The finest pictorial presentation of the Grand Canyon State ever published. One of the outstanding color photographers of the world, Muench has selected 160 of his 4-color photographs which are augmented by comprehensive text of David Toll. Hardcover, 11x14 format, 200 heavy slick pages. \$25.00.

MAP OF PIONEER TRAILS Compiled by Varna Enterprises. Publishers of popular maps on lost mines and ghost towns in California, Varna has released a new large map on pioneer trails blazed from 1541 through 1867 in the western United States. Superimposed in red on black and white, the 37x45-inch map is \$4.00.

BAJA CALIFORNIA BY ROAD, AIRPLANE AND BOAT by Cliff Cross. Author of a popular travel guide to the mainland of Mexico, Cross has compiled a comprehensive book on Baja California. The new guide is well illustrated with detailed maps of the villages and bays along the 1000-mile route plus travel, history and fishing information. Large format, heavy paperback, 170 pages. \$3.50.

NEVADA GHOST TOWNS AND MINING CAMPS by Stanley W. Paher. Covering all of Nevada's 17 counties, Paher has documented 575 mining camps, many of which have been erased from the earth. The book contains the greatest and most complete collection of historic photographs of Nevada ever published. This, coupled with his excellent writing and map, creates a book of lasting value. Large 9x11 format, 700 photographs, hardcover, 492 pages, \$15.00.



WESTERN GEM HUNTERS ATLAS by Cy Johnson and Son. A helpful book of detailed maps showing gem and mineral locations, from California to the Dakotas and British Columbia to Texas. Markings note private claims, gem claims (fee charged) and rock and gem locations. Also suggested reading for more detail on areas included and other rich areas not included in this publication. Paperback, maps galore, collector's library, 79 pages, \$3.00.

THE BEAUTIFUL SOUTHWEST by the Editors of Sunset Books. A pictorial with a brief text showing modern day activities of cities such as Phoenix, El Paso, Taos, and communities below the Mexican border, and covering the Southwestern states, canyons and deserts. 240 photographs of which 47 are four-color, large format, 223 pages, hardcover, \$10.95.

OVERLAND STAGE TO CALIFORNIA AND THE PONY EXPRESS by Frank A. Root. A first-hand account of a mail agent who lived and fought with the men who settled the West through their efforts to establish communication across the wilderness during the 1800's. First published in 1901 and just republished. Heavy stock and hardcover, original artist illustrations, two 1800 maps, 645 pages, this is a book for history buffs, \$15.00.

ON DESERT TRAILS by Randall Henderson, founder and publisher of Desert Magazine for 23 years. One of the first good writers to reveal the beauty of the mysterious desert areas. Henderson's experiences, combined with his comments on the desert of yesterday and today, make this a MUST for those who really want to understand the desert. 375 pages, illustrated. Hardcover. \$6.95.

GHOST TOWNS OF THE NORTHWEST by Norman D. Weis. The ghost-town country of the Pacific Northwest including trips to many little-known areas, is explored in this first-hand factual and interesting book. Excellent photography. Best book to date on ghost towns of the Northwest. Maps. Hardcover, heavy slick paper, 319 pages. \$6.95.

GEM TRAILS IN CALIFORNIA by A. L. Abbott. This compact little book can easily be carried while hiking or riding and combines detailed map drawings with pictures. In addition to gem and mineral names with their specific locations, there are other leads to nearby ghost towns, fossils, campgrounds and recreation areas. Paperback, well illustrated, 84 pages, \$2.95.

WILY WOMEN OF THE WEST by Grace Ernestine Ray. Such women of the West as Belle Starr, Cattle Kate and Lola Montez weren't all good and weren't all bad, but were fascinating and conflicting personalities, as researched by the author. Their lives of adventure were a vital part of the life of the Old West. Hardcover, illustrated, 155 pages, \$5.95.

DANCING GODS by Erna Ferguson. Many Indian dances and ceremonies of the Southwest are open to the public, but some are restricted or closed to viewing. How this came about is explained by the author who describes and locates the dances open to the public, and why some are not. Paperback, illustrated, 280 pages, \$2.45.

LAS VEGAS (As It Began—As It Grew) by Stanley W. Paher. Here is the first general history of early Las Vegas ever to be published. The author was born and raised there in what, to many, is considered a town synonymous with lavish gambling and unabashed night life. Newcomers to the area, and even natives themselves, will be surprised by the facts they did not know about their town. Western Americana book lovers will appreciate the usefulness of this book. You don't have to gamble on this one! Hardcover, large format, loaded with historical photos, 180 pages, \$10.95.

PADRE ISLAND (Treasure Kingdom of the World) by William Mahan. At the age of 13 the author had done research on lost treasures and completed a scrapbook on the subject. In later years, he discovered "Padre Island," off the coast of his home state of Texas. Bill Mahan is well qualified for his work having made countless trips to Padre where he relates in historical detail of lost treasures, shipwrecks and savage Indian tribes. If you are an historian or treasure hunter, you'll "dig" this adventurous accounting. Hardcover, illustrations, maps, translations of Fray Marcos de Mena from Spanish to English, 139 pages, \$6.95.

LOST LEGENDS OF THE WEST by Brad Williams and Choral Pepper. The authors examine the "lore, legends, characters and myths that grew out of the Old West" in a sequel to their popular first book, *The Mysterious West*. Included among the more than 20 "lost legends" are such intriguing subjects as lost bones, lost ladies, lost towns, and lost diamonds. Hardcover, illustrated, 192 pages, \$5.95.

GHOST TOWNS OF THE WEST by the Editors of Sunset. Compares the past with the present and provides both a detailed and overall picture of the early-day west. The outstanding collection of historic photographs are matched by current-day photos by William Carter. Hardcover, 11x9 format, heavy slick paper, 225 pages, maps, diagrams, etc. \$11.75.

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Books for Desert Readers

CALIFORNIA
An Illustrated
History
By
T. H. Watkins



The author is a native Californian and his articles on western history and conservation have appeared in many magazines, including *American Heritage*. He is an associate editor of *The American West*.

This 400-year epic of the Golden State, from the coming of the Spaniards to our challenging present, is not only colorful in historical fact, but in the many illustrations of the old and the new in picture and art form. It is considered the most beautiful and comprehensive pictorial treatment the history of California has ever received; some 450 illustrations with more than 100 of them reproduced in full color.

From 1540 to 1900, the author describes "The Land Waiting" as he progresses from myth to reality in Section One, called "The Island" and a land of golden griffins—the arrival of the Spaniards, the Indians, who were already here, and the arrival of the Padres like Fray Junipero Serra, who built their missions along the Spanish trails.

From there *California* unfolds into Section Two, "The Money Machine" wherein are described the Fools of '49, along with the advent of the railroad, the automobile and all that went with the excitement of the days of gold. Politics, people and power also enter into the picture and California as a state reaches out for water and oil. Then came the romance of wheels and wings when aviation became synonymous with Southern California, leading into the 20th Century, through the San

Francisco earthquake and on into the depression that swept through the state economy like a scythe creating a welter of problems and a dearth of solutions.

The movie industry and the glamor that was once Hollywoodland and the "Dream Machine," some of which came true, paints another chapter in this colorful epic. From there the author takes his readers to "The Giant With Four Legs," in which is described the rise of California agriculture—an epic of water, land, industrialization, and labor.

Then on to "The Celebration of Steel," surrounding the openings of the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge in the mid-30s. Then came the war years and industry connected with it, the politics following, the conservation, the planned communities, new growth, new architecture, and the constant challenge of the concept and effects of this growth.

California is a monumental achievement, crossing the barriers of time to illuminate both past and present. It is a powerful tool in the quest of understanding—which is, as the author has written elsewhere, "that shield we hold against fate and its consequences, the only real reason for the art of history."

Hardcover, large format, beautifully illustrated, 544 pages, \$25.00. □

TURQUOIS

By
Joseph E. Pogue
(Memoirs of the
National Academy
of Sciences.)



Author Pogue holds an incredible number of distinguished and honored positions in the fields of petroleum and geological technology. Along with these talents, he defies the dictionary by preparing his paper on *Turquoise* without the final "e."

The first edition of this "Rio Grande Classic" was published in 1915; the present, or third edition, in 1973. The third differs from the first in the following ways: A new Publisher's Preface, a new scholarly introduction, a new alphabetical listing of currently-operating turquoise mines, a new and extensive list of references and bibliography and 16 new full color plates with captions and table.

The work contains everything you might want to know about Turquoise, but were always afraid to ask. The publishers, the author, the assist from geologist-mining engineer Rex Arrowsmith, and color photography of Len Bouche, Richard Dells production staff, all must take credit for a fascinating history of a valuable mineral as well as one of mystic properties and religious signification.

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The book amply illustrates the great difference between the high desert chia, and the Mexican variety, *Salvia Hispanica* sold presently in the health food stores.

It also identifies the energy-factor, a little known trace mineral found only in the high desert seeds, suggesting in this a possible breakthrough in human nutrition.

To round the book out, a section on the vitamins, minerals, proteins, enzymes, etc., needed for good nutrition, has been added.

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HUNGRY BILL'S

A PARK SERVICE sign marks the beginning of the Johnson Canyon jeep trail. But that's all there is to indicate the way to the site of one of Death Valley's most unusual and improbable enterprises.

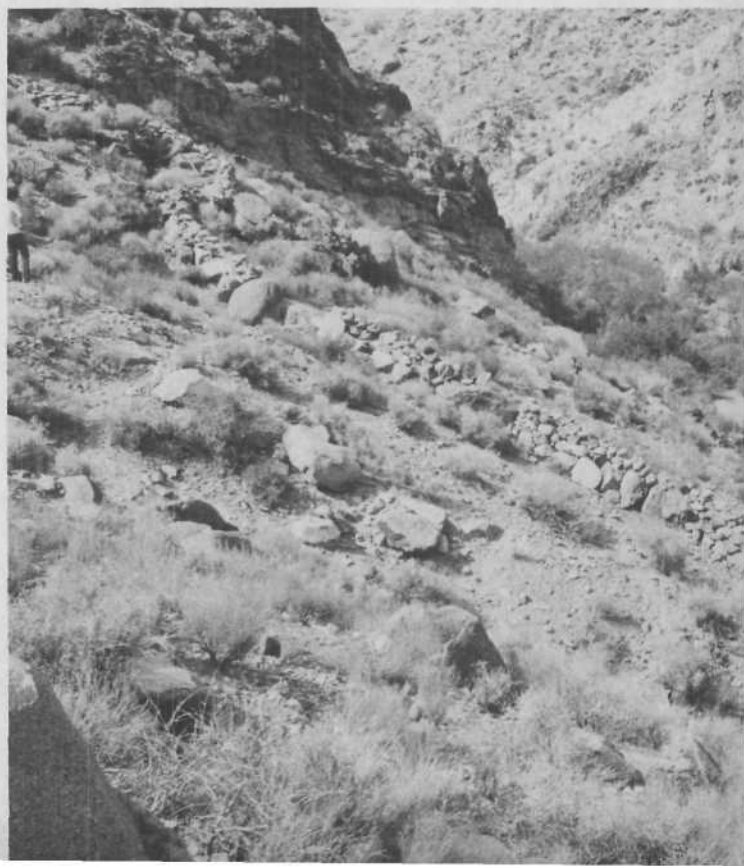
Johnson Canyon penetrates the heart of that massive block of mountains that forms Death Valley's western wall, the Panamint range. The upper reaches of the canyon have been blessed with an ample supply of the desert's most precious commodity, water. There are several springs and a clear, sparkling stream which flows miles down canyon before it sinks and disappears into the gravel wash.

However, the canyon is barely wider than the stream in many places, its walls are steep and precipitous, and what little soil exists is poor and liberally laced with rocks, making Johnson Canyon a most unlikely place for agriculture.

But in 1873 a startling announcement reached the west's centers of civilization, sparking wild hopes and even wilder speculation. Silver had been discovered

Above: A segment of the stone-lined aqueduct that winds through Johnson Canyon.

Right: One of the mysterious stone walls, built by the Indians, and the cause of a great deal of concern among Panamint prospectors until the construction became evident.





One of the three fig trees planted by the Swiss farmers.

by
**Betty
Shannon**

HIDEAWAY



on the western slope of the Panamints. Within a year, hundreds of people were swarming across the desert and up a narrow toll road into the newly established Panamint City.

Following that trail was a small but ambitious group of Swiss immigrants. Knowing that a mining camp cannot live solely on the gleam of metallic riches, and seeing the scarcity of fresh produce and the price it could demand, the immigrants continued on over the crest of the mountains. Their journey ended in Johnson Canyon. Settling down to the back-breaking task of removing brush and boulders, they cleared a spot where they hoped to grow fruit and vegetables to feed the isolated town's burgeoning population. From the site they had selected their market was ten miles away by trail.

Although little is known about the group, there is evidence that their agricultural adventure met with at least limited success. Lieutenant Rogers Birnie, Jr., on an assignment to explore Death Valley, led a contingent of seven men through

Johnson Canyon in July, 1875. In his journal of the expedition he mentioned passing a small place where vegetables were being raised by irrigation. But Panamint's boom was short-lived, and its bust that same year also ended the hopes of the Swiss farmers.

Today, by following a foot trail up Johnson Canyon, visitors can see the remnants of their efforts. The "ranch" lies along the north side of the creek at a point where the canyon is wide and open. Four thick stone walls enclose the one-time garden plot, and gently sloping area about 300 feet long and 100 feet wide. Evenly spaced along the north wall are three ancient fig trees, survivors of a fledging fruit orchard that was said to have also included apple trees. Though lacking care and adequate water, the trees still faithfully bear a crop of diminutive yellow Kadota figs each year.

The immigrants probably lived in tents during their brief occupancy of Johnson Canyon. Contrary to one published report, there is no abandoned stone-wall house, nor are there the ruins of any such structure. Chiseled into the sloping north side of the canyon are three level areas, each about 12 feet square, which most likely were the sites for tent houses.

After the departure of the Swiss, Hungry Bill, the son of a Shoshone chief, claimed the ranch and for years it remain-

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The sign along Death Valley's Westside road marking the Johnson Canyon jeep trail. In the background trail climbs the alluvial fan to the mouth of the canyon.

ed his exclusive domain. As a young boy, Hungry Bill is said to have witnessed the entrance of the first white people into Death Valley in 1849.

Conflicting accounts of Hungry Bill and his exploits have been recorded in several early volumes on Death Valley history. However, all do seem to agree that Hungry Bill acquired his name through his habit of stopping white men traveling across Death Valley and begging food from their packs. The stories vary as to the fate of those who refused his requests.

Johnson Canyon was considered the ancestral home of Hungry Bill's people. A cave, far up the canyon, was the birthplace of Panamint Tom, brother of Hungry Bill. It is a probable assumption that when Bill took up residence at the abandoned ranch he was only repossessing land that he considered rightfully his. But one historical source states that the Indian received the ranch as payment for his service to the government as a scout during the Modoc War in the lava beds of northern California.

A role in the taming of Death Valley has also been attributed to the tall, powerfully-built Shoshone. Following the discovery of borax, the company contracted with Hungry Bill and his brother to build a road across that broken, tortured landscape now known as the Devil's Golf Course. Together they succeeded in smoothing a trail for the borax wagons by beating the pinnacles of the saltbed

flat with sledge hammers. They also supplied fuel, mesquite brush and wood for ten dollars a cord, to boil the borax.

Throughout the years Johnson Canyon has also attracted its share of prospectors and miners. Although no great wealth has been credited to the canyon, its interesting assortment of artifacts remains from the early day mining activities.

A small, stone-lined aqueduct, several stretches of it still intact, snakes along the canyon bottom. There are at least three arrastras, a primitive device of Mexican origin for pulverizing ore. An arrastra consists of a circular wall built around a central pivot point; the enclosed area is paved with flat stones. Ore was placed in the basin-like structure, and heavy stones were pulled over the ore, eventually breaking it up. Usually a burro or mule, yoked to a center shaft, provided the energy to operate the arrastra, but at least one of the arrastras in Johnson Canyon may have been water-powered. A stone structure, adjacent to one, appears to have once held a water barrel.

The most curious constructions, however, are several stone walls, about three feet high, unconnected, and which seemingly serve no useful purpose. One wall runs only twenty or thirty feet along a recess in the canyon's south face high above the streambed. Another runs several hundred feet, following the contours of a brushy hillside and roughly parallel to the stream.

According to a report published in

1891, the Indians had only recently built the meandering walls, their construction causing a great deal of concern among prospectors in the Panamints. As mining was forecast in the minds of the white men, it was assumed the stones were being piled as a line of fortification to defend discoveries of immense value.

However, mutton, not money, was of more immediate importance to the Shoshones. The walls had been strategically placed along the runways of the desert bighorns, to serve as blinds for the hunters. As a result, thirty sheep were taken in a big drive. When the Indians were observed bringing the game into their camps, the excitement among the prospectors quieted down.

Remote and removed from the impact of civilization, Johnson Canyon is only a little more accessible than it was a century ago. The Johnson Canyon jeep trail takes off from Death Valley's Westside road, eight miles south of the site of the Eagle Borax works. The trail is rough and rocky as it climbs the alluvial fan, a distance of six miles from the Westside road to the mouth of the canyon.

Officially the trail terminates there, but

it is possible to drive another three and one-half miles by following the previous tracks up a broad, rocky wash. The canyon divides about two and one-half miles from its mouth. One set of tracks follows the south fork and ends in a short distance. The main trail continues up the north fork for another mile, crosses the last trickle of the stream before it disappears underground, and ends in a lush grove of cottonwoods. Here, on the slope above the stream are several excellent, but unimproved campsites. This also is the beginning of the foot trail which continues on up Johnson Canyon.

The first arrastra, an exceptionally well preserved example, is just a few hundred yards up the canyon on the south side of the trail. Watch for it, as it is easy to walk past without recognizing the carefully placed stones which blend into the desert landscape so well.

The trail continues up the canyon, closely paralleling the stream, crossing and recrossing it several times. The hike to the ranch takes about an hour, a distance of two or two and one-half miles.

Hungry Bill died in 1928. It is said that recently his sister, Mabel Bill, and

her husband spent a summer at Hungry Bill's Hideaway.

What voices they might have heard reverberating from those deep canyon walls! Perhaps there's a legend there — alive, vital, yet untold. So when you visit Johnson Canyon, let your imagination race with history . . . listen for Hungry Bill's moccasins padding along the creek bed . . . you may even "see" a tall shadow of this noble Shoshone! ☐

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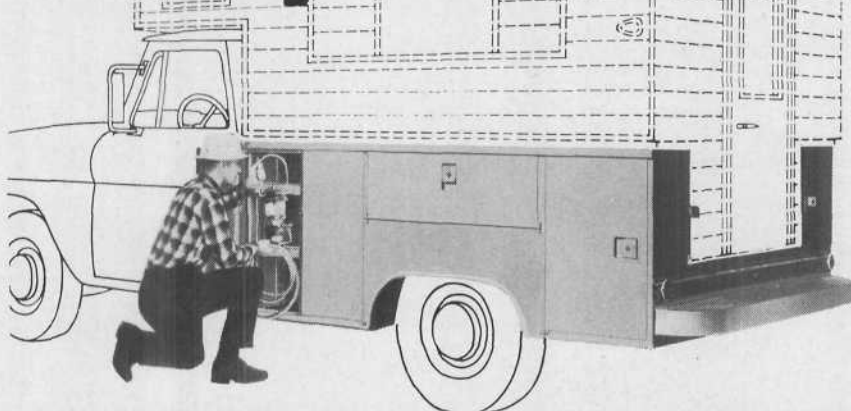
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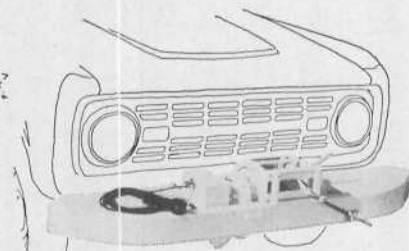


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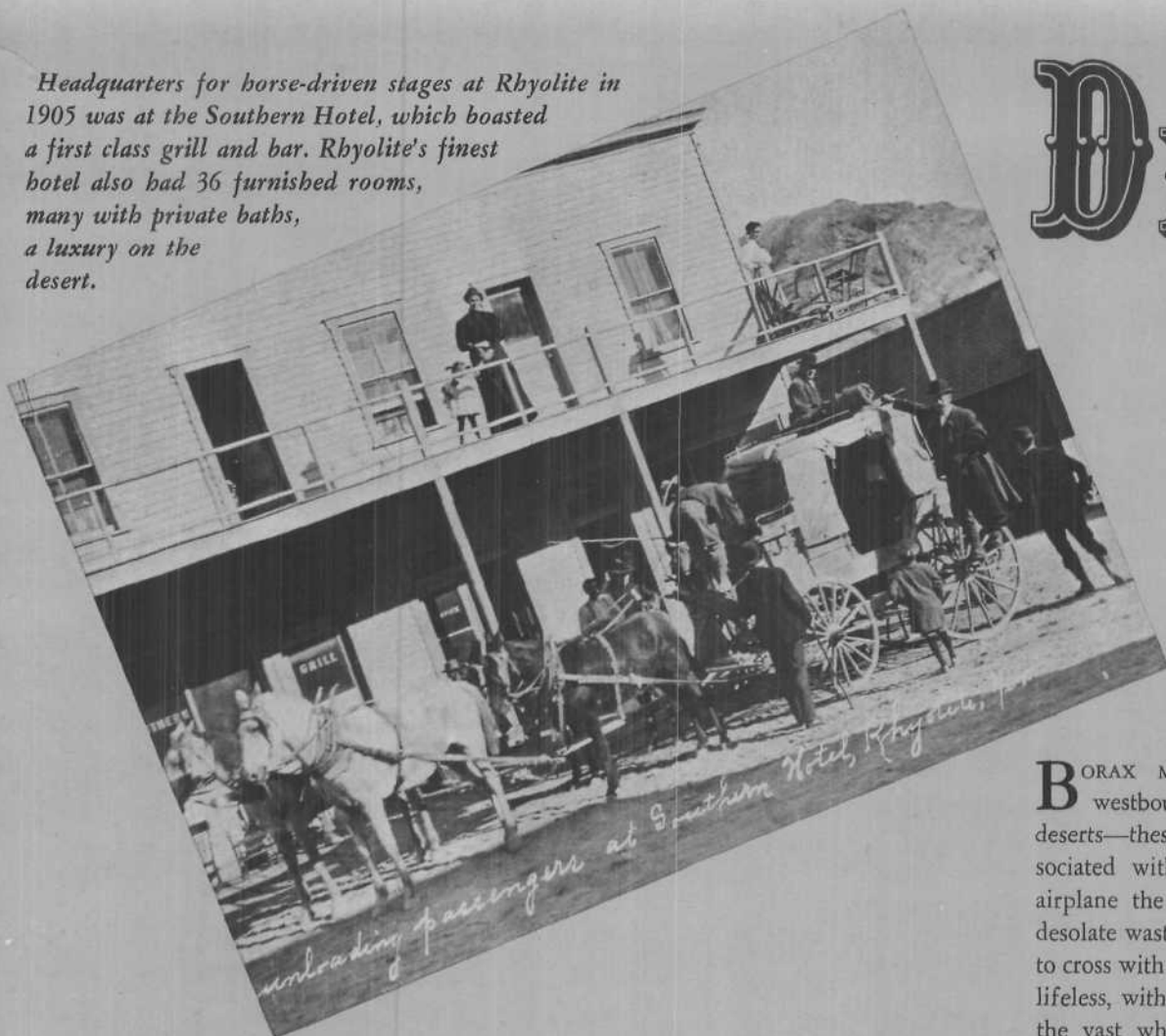
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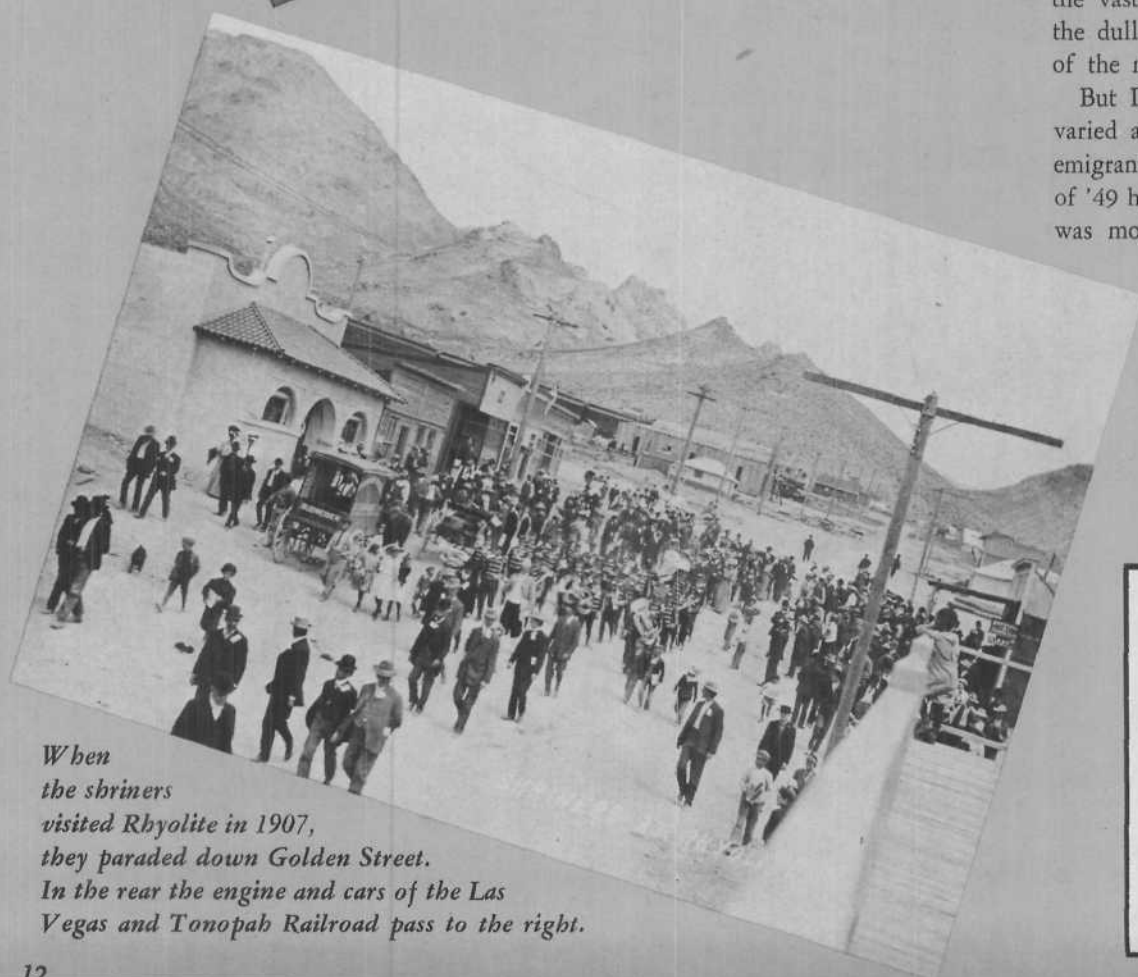
Headquarters for horse-driven stages at Rhyolite in 1905 was at the Southern Hotel, which boasted a first class grill and bar. Rhyolite's finest hotel also had 36 furnished rooms, many with private baths, a luxury on the desert.



DEATH VALLEY

BORAX MINING, high temperatures, westbound emigrants and forbidding deserts—these words are frequently associated with Death Valley. From an airplane the valley looks like a barren, desolate wasteland which one would want to cross with a minimum of delay. It looks lifeless, with no apparent vegetation amid the vast white stretches of saltpan and the dull brown alluvial fans at the base of the mountains.

But Death Valley has a history — a varied and significant one. The story of emigrants crossing the valley in the days of '49 has been told and retold, but there was more. There were gold and silver



When the shriners visited Rhyolite in 1907, they paraded down Golden Street. In the rear the engine and cars of the Las Vegas and Tonopah Railroad pass to the right.

EDITOR'S NOTE:

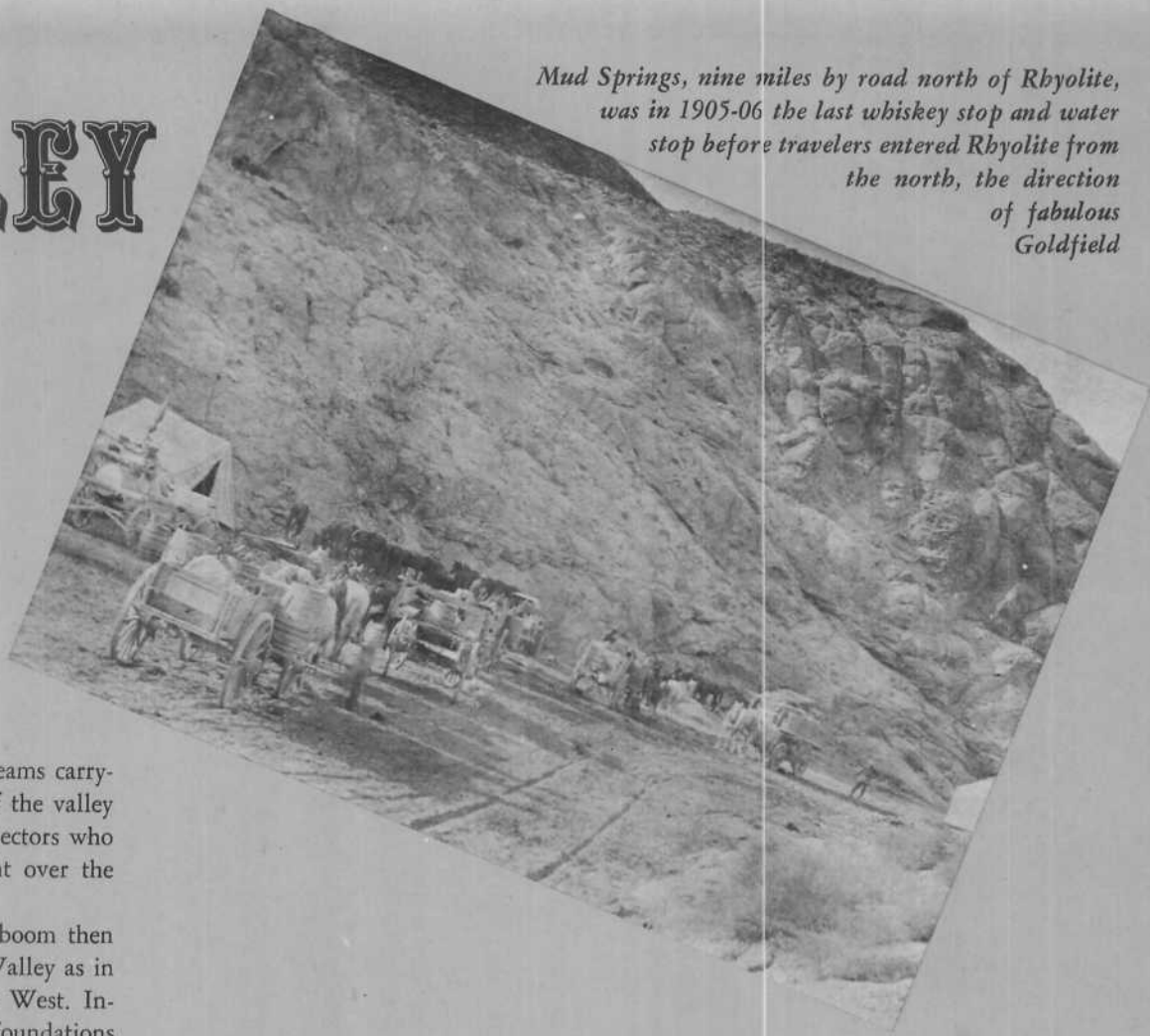
Stanley Paher is the author of many books of the West. His most recent book is entitled "Death Valley Ghost Towns" and is amply documented with almost five dozen rare and historic photos of Death Valley, towns like Skidoo, Rhyolite, Greenwater, Ryan

VALLEY

OSTS

by Stanley Paher

Mud Springs, nine miles by road north of Rhyolite, was in 1905-06 the last whiskey stop and water stop before travelers entered Rhyolite from the north, the direction of fabulous Goldfield

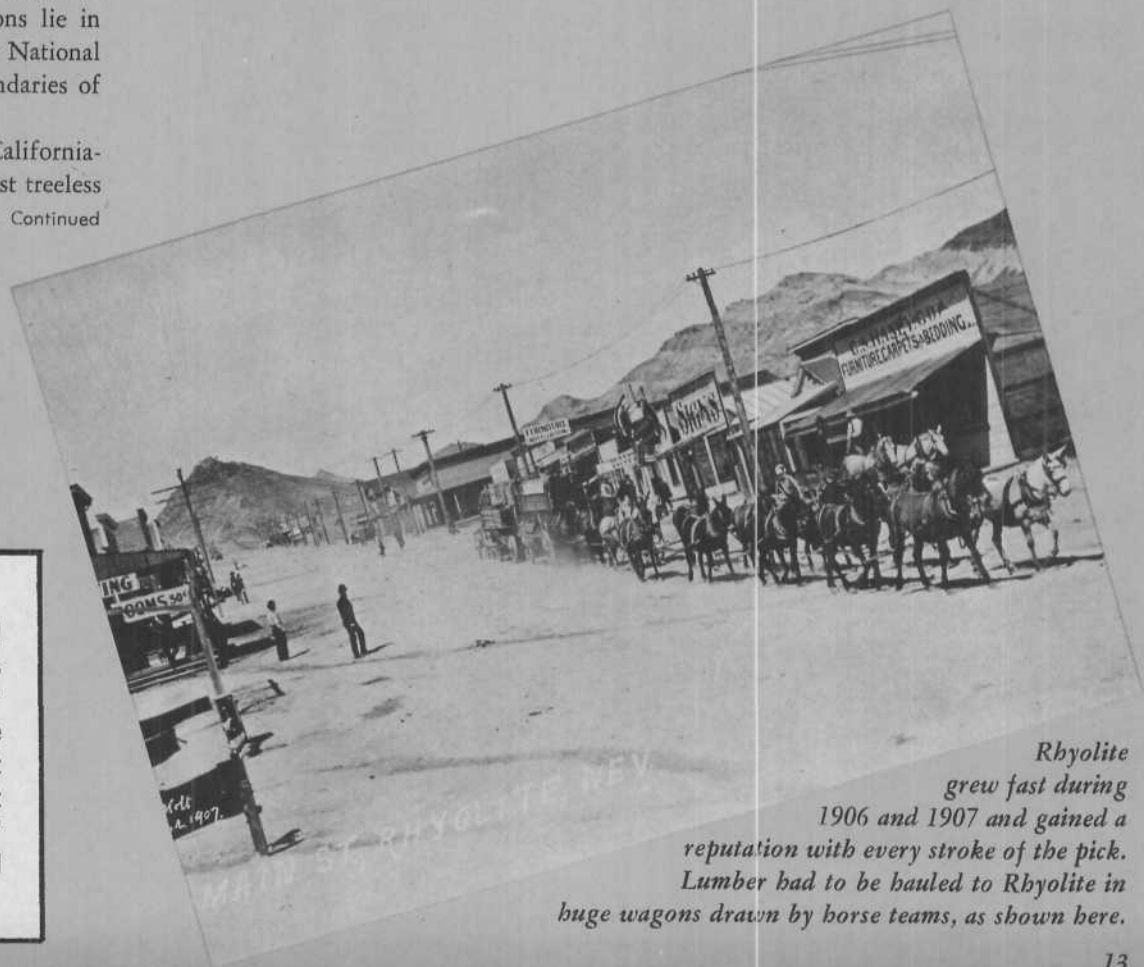


mines, boom towns, 20-mule teams carrying huge loads of borax out of the valley and a fraternity of dusty prospectors who wandered in restless discontent over the chalky floor of Death Valley.

The mining camp cycle of boom then bust was as evident in Death Valley as in any other part of the mining West. Indeed, the skeletal ruins and foundations of dead camps and stage stations lie in all directions from Death Valley National Monument and within the boundaries of the Monument itself.

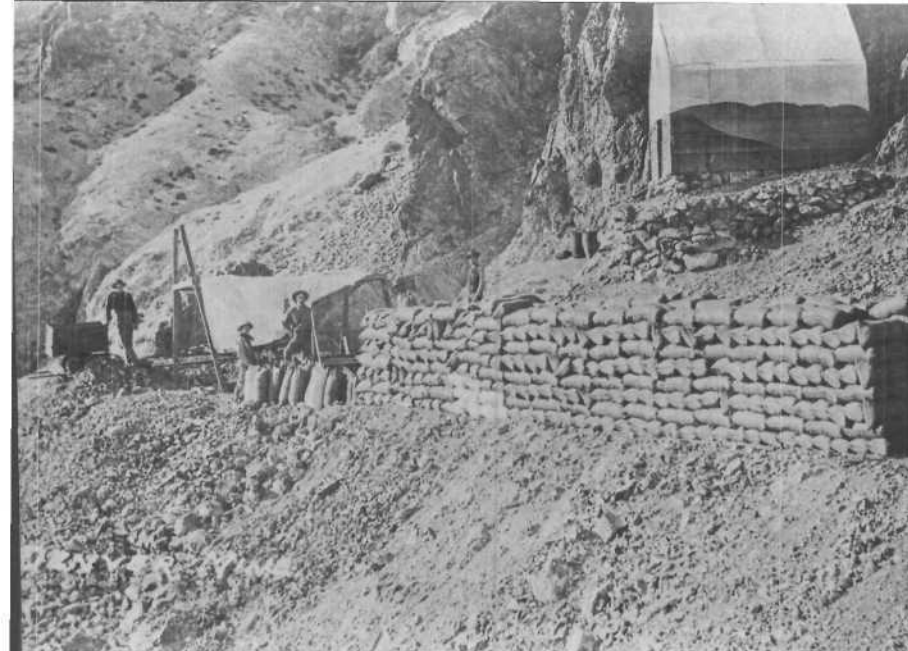
Only several months after California-bound emigrants crossed this vast treeless

Continued



Ballarat and Panamint, and people like "Shorty" Harris and "Seldom Seen Slim." Stanley's other works include "Northwestern Arizona Ghost Towns," "Nevada Ghost Towns and Mining Camps," "Ponderosa Country" and "Death Valley Teamsters."

Rhyolite grew fast during 1906 and 1907 and gained a reputation with every stroke of the pick. Lumber had to be hauled to Rhyolite in huge wagons drawn by horse teams, as shown here.



At the Denver mine (left) high-grade ore is sacked awaiting shipment to the mill.

Right: Not all of Death Valley's settlements were mining camps. Besides the famous Furnace Creek Ranch, there were stage stations, such as Stovepipe Wells.



alkali plan in 1849, fantastic stories of scorching temperatures and rich gold mines emanated from the valley. A few intrepid prospectors did penetrate the eastern California deserts for minerals during the decade of 1850. Initial work was started at Salt Springs, a small mining district 29 miles north of Baker, early in 1850. Gold discoveries there had been made a year earlier by men following the famous Mormon guide, Jefferson Hunt.

Though worked by two mining companies in 1851, the effort at Salt Springs died out within a few years. General remoteness and Indian troubles hampered operations, and local arrastras (crude pits in which ore is ground by large revolving stones) could not make the ore pay. There was no mining effort in the important

mineralized areas adjacent to Death Valley before 1860.

After 1861 a few small companies and other individuals mined gold and silver in the deserts. Prospectors searched the area immediately west of Death Valley for the so-called "Lost Gunsight Lode," a phantom silver deposit believed to have been discovered by a westbound party of emigrants in 1849. Dr. Darwin French's 15-man prospecting party found ore at a point 25 miles south of modern Keeler, on the east side of the Coso Range. The new camp of Coso that soon sprang up was a West Coast sensation in 1861. Unfortunately, that effort died out by the middle of the decade.

The first sustained boom near Death Valley took place at Panamint, early in

the 1870s. That camp on the west flank of the Panamint Range came into being only weeks after three prospectors found silver in Surprise Canyon, early in the winter of 1873. The magic of Panamint lured the money of investors from the Bay area as well as capital from Nevada's two Senators, Jones and Stewart. About 2000 people were drawn to Panamint by 1874, but the decline of the camp came a year later as small veins discouraged large development. A flash flood in 1876 dampened the spring of the camp. Today numerous foundations and walls of a huge mill are left to indicate the site of Panamint City.

Finally it was borax in the early 1880s that put Death Valley on the map. Early borax mining and refining took place at the Amargosa Borax Works (generally summers only), Eagle Borax Works and at the Harmony Works. Work at these three plants took place at various times from 1882 until Harmony shut down in 1888. Ore was hauled from the center of Death Valley 165 miles to the railhead at Mohave by the famous 20-mule teams.

After 1890 brave adventurers explored the area and discovered many springs which aided prospectors and travelers who ventured into the Death Valley country early in this century. Such important mining camps as Rhyolite, Skidoo and Greenwater then were developed.

The 20th century mining booms in Death Valley came about after intensive prospecting which had been stimulated by the remarkable mineral discoveries at Tonopah in 1900, Goldfield in 1902, and Rhyolite in 1904. Prospectors then combed the mountain ranges surrounding Death Valley, and several districts were

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Right: One of the original towns in the Greenwater district was Furnace, the camp of the Furnace Creek Copper Company, whose principal backer was "Patsy" Clark. In early 1907 the one-year-old town consisted chiefly of tent buildings.



organized and mining development commenced.

Rhyolite was the richest and perhaps the noisiest of the new desert camps early in this century. Only weeks after the initial discovery of green-colored ore by Eddie Cross and "Shorty" Harris, a red-hot mining rush was started in the direction of what became the Bullfrog district. Amid the mines and prospect holes of the district, the town of Rhyolite was platted in February 1905. Within three years the population grew from a mere handful to about 6000 restless souls, not including hundreds of transients who left early after learning that the principal properties already had been claimed.

But except for a few mines, development work was discouraging because of low-grade ore. The national financial panic of 1907 closed down all but one mine, and easy credit quickly dried up. After World War I only one person was left in Rhyolite, and for awhile during the 1930s the town was completely abandoned. Today a half dozen people reside amid the railroad depot, the bottle house, and the pale and concrete skeletons that used to be the business district.

But the camp with the greatest speculative backing was Greenwater. It had everything a successful mining town needed except ore. The rush to Greenwater started in the winter of 1906, about a year after initial discoveries of rich copper ore were made on the east side of the Black Mountains. For several months in 1906 hundreds of people came and went, and by early 1907 Greenwater had a population of about 1000. Serious miners rubbed shoulders with speculators and merchants from all walks of life. Competing weeklies

continually boomed the mines. But when copper could not be found in commercial quantities, the district declined late in 1907. Only some cellars and broken glass mark the site of Greenwater.

Skidoo was another member of the class of 1907. In that year the camp had more than 500 people which supported a weekly newspaper, a school, a bank, several saloons, stores, and a humming "red light" district. Later, in 1907, many people left, but a new era was begun for the camp in 1908 when Skidoo Mines Company began to mine the principal properties in earnest. This era of the company lasted until 1917, producing more than \$1.5 million in gold, according to official production records. But nothing today is left of the Skidoo townsite. The ruins of a

mill, a few graves and a mine portal are left at the Skidoo Mine.

Other smaller 20th century camps in the Death Valley country include Ryan (both an older camp and a newer camp by that name), Leadfield, Furnace, Keane Wonder Mine, Chloride Cliff, and the Ashford mine. But in the final analysis Death Valley was not the setting for a rich mining camp such as many of those on the Mother Lode or in central Nevada. Nevertheless, the search for rich deposits of borax, gold and silver brought economic life to Death Valley and later brought attention to its beauty and grandeur as a tourist attraction. Ultimately, in 1933, Death Valley National Monument was created to set aside this unique land. □



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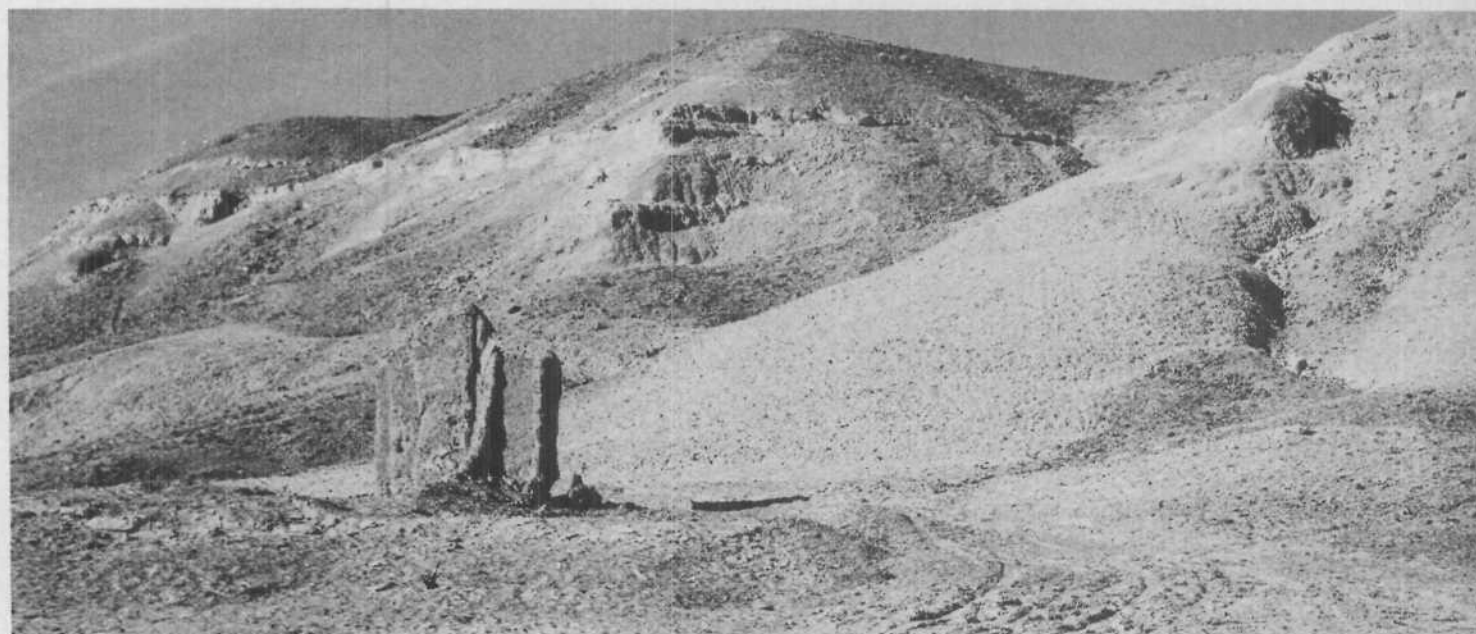
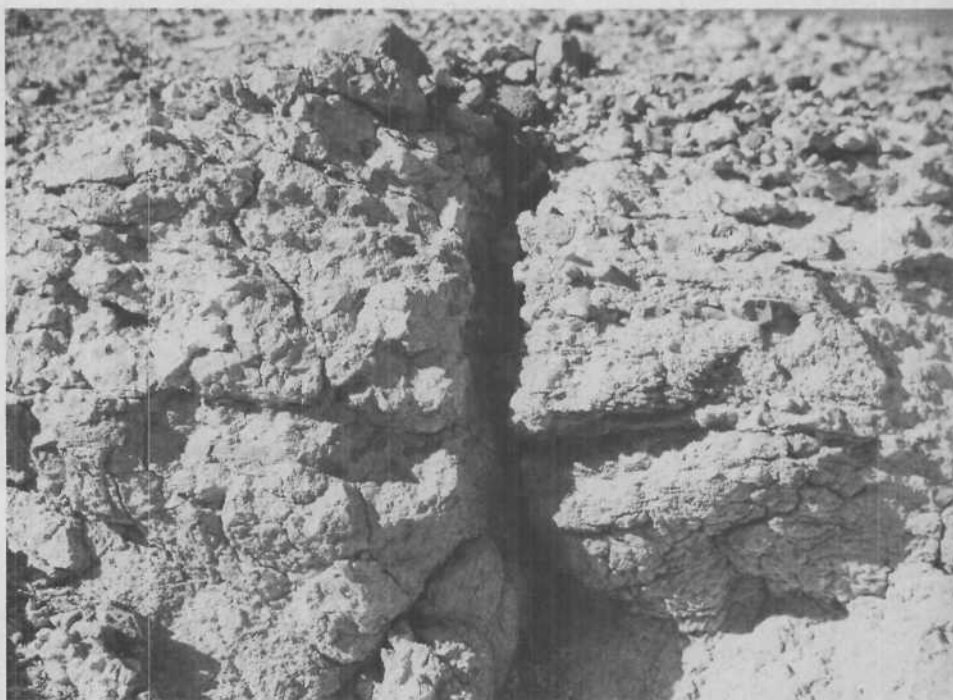
TECOPA

A California Field Trip

photos by
Jerry Strong

Right: Fire opals occur in warty, irregular concretionary masses both insitu and in the talus. Small, but colorful, the opals are extremely difficult to remove from the matrix.

Below: Just west of Highway 127, the ruins of the Amargosa Borax Works are gradually "melting" back into the earth. It serves as a marker for the opal deposit in the Silica Hills.



LOOKING DOWN from Ibex Pass, the first glimpse of Tecopa Country does little to confirm it as a "land of little rain and plenty water." This may seem an incongruous description of an area separated only by a mountain range from one of our country's most arid regions—Death Valley, California.

In the basin far below, crowded on all sides by bleak desert ranges, lies exposed the skeletal remains of Ancient Lake Tecopa. Small buttes, low hills and

pinnacles rise from the elongated playa like ships on a shimmering sea of mud. Their muted tones of grey, white and beige add to the awesome starkness of this seemingly lonely land. Off to the east, a dark blotch of color denotes the "hub" of the area—Tecopa, a place for healing man's body, as well as his soul.

Though rain is a seldom visitor, springs bubble forth in unexpected places throughout Tecopa Country. Long in use as a "resting place" by the early Indians,

John C. Fremont was one of the first white men to travel through the area in 1844. He made note in his diary of "a large spring of good water." Later, the site became known as Resting Springs—a welcome respite for wagon trains traveling the Old Spanish Trail from Salt Lake, Utah to San Bernardino, California.

However, it is the hot springs several miles northwest of Resting Springs that have brought fame to the locale in more recent years. The merits of their curative

Desert Magazine

COUNTRY

by
Mary
Frances
Strong



Left: The Tecopa Railroad was built in 1910 to haul the ores of the Gunsight and Noonday Mines. Dismantled in the 40s, rotting ties and rusty spikes denote the former railroad grade. Below: Noonday City now slumbers peacefully at the southern end of the Nopah Range. It was once a bustling camp when rich silver-lead ores were mined from the Gunsight, Noonday and War Eagle properties.



powers have widely circulated; and people have come from many parts of the country to seek relief from pain in the warm (108 degrees), mineral-laden waters.

Tecopa Hot Springs has been developed for public use by Inyo County Department of Parks and Recreation. Two bath-houses are open 24 hours a day. Use of the facilities are free. An undeveloped campground offers water and sanitary facilities at \$1.00 per night. Weekly and monthly rates are available. Lloyd and

Winnie Miller were Park Supervisors when we stayed in the area. They seemed to find their work a "labor of love" and made every effort to make sure all visitors enjoyed a pleasant stay at the springs.

Its close proximity to Death Valley makes Tecopa Country an ideal location for a winter vacation. Hot mineral baths, rock collecting and exploring historical sites keep visitors busy. Four-wheelers and trailbike enthusiasts find plenty of room to roam in the wide open spaces.

When California's gold rush was over, thousands of men who had not found their "pot of gold" began to fan out into the Nevada and California deserts in search of golden treasure. Lead and silver, not gold, lay waiting in Tecopa Country. Discovery was made in 1865 and the Gunsight Mine developed. A 10-stamp mill and three furnaces handled the ores.

Mining became intermittent late in the century but, by 1907, new machinery was installed at the Gunsight and Noonday



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Resting Springs, an important stop along the Old Spanish Trail to Southern California, surfaces in a "badlands" topography.

mines. The arrival of the Tonopah Tidewater Railroad at this time brought a resurgence of mining to the district. Wagons were used to haul the ores over a six-mile route to Tecopa Station (four and one-half miles southwest of Resting Springs). The mine owners pressed for a spur track and after much confusion and delay, their hopes were realized in 1910 when the nine and one-half mile Tecopa Railroad was completed.

Equipped with a steam engine and several ore cars, the little line began operations. Ore was delivered twice daily to the concentration mill at Tecopa while "high value" ore was shipped on to the smelter at Murray, Utah. Though short in length, the Tecopa Railroad was long on excitement. Grades were steep and the loaded train literally "roared down the track" to Tecopa. There were a number of runaway trains and several men killed.

The great depression of the 1930s brought mining to a standstill throughout the United States. Tecopa was not an exception and many properties were sold at

tax sales. The Tecopa Railroad also met this fate and the rails were taken up for scrap.

In 1947, the Anaconda Copper Mining Company purchased the Gunsight and Noonday Mines along with nearly a dozen other properties. A flotation mill was built and handled 75 to 85 tons of ore daily. Mill concentrates and ore of shipping grade were hauled to Dunn Siding on the Union Pacific Railroad for shipment to a smelter at Toole, Utah. The mines are presently idle and the camp of "Noonday City" stands patiently waiting for a new era in mining. With the current rise in the price of silver, it may not wait much longer.

A mile south on Tule Wash are the remnants of a mill and camp from the earlier era. The site is partially occupied—possibly by employees of the nearby Western Talc Mine.

Gem collectors will find a fine area for amethyst crystals in the Kingston Range, 11 miles southeast of Tule Wash. There is no surface material and hard digging is required. The beautiful crystals to be

found—groups and singles—are well worth the effort required to obtain them. It is an easy-to-reach locale. Just follow the road log below as I haven't shown this area on the map.

Kingston Amethyst Road Log

Miles

- 0.0 Tecopa Postoffice. Take the Tecopa Road east.
- 8.6 Keep ahead. Road on right to Western Talc Mine.
- 4.7 Pavement ends as road starts up pass in the Kingston Range.
- 6.3 Summit 5200 feet.
- 1.0 Turn right onto two-track road. (Often hard to see after storms or when the road grades goes through). Follow tracks over hill. Not for trailers.
- 1.1 Fair camping area. Amethyst veins about $\frac{1}{4}$ mile south of camp via trail.

Car mileages will vary over long distances. Take mileage at the summit and go one mile. If you pass through a cattle-guard you have gone too far. Though the road through the Kingstons is graded, it is narrow in places. The last five miles is a steep pull for trailers.

Along the western shore of Pleistocene Lake Tecopa, just west of Highway 127,

are the ruins of another early-day mining venture — the Amargosa Borax Works. This was the "summer home" of the Harmony Borax Works of Death Valley. During the summer months, when heat made mining in the Valley unbearable, operations were moved to Tecopa Country. A plant was built and borax mining continued in the cooler, 110 degree temperatures from 1882 to 1890.

The ruins are quite photogenic. Built of "desert adobe," they are melting back into the earth from which they came. Several wells were drilled and one now forms a small pool. It seems to be a popular car washing location. "Gives them real silicone polish," one man told us.

Immediately west of the borax ruins rise the Silica Hills—a barren, desolate region of badlands topography. Within their confines, only a short distance from the highway, will be found precious opal resembling the beautiful Australian material.

The hills consist of silicified tuff with various horizons honey-combed with pipes and tubules (concretionary masses) filled with opal. Unfortunately, there are two drawbacks to this material. The opals are

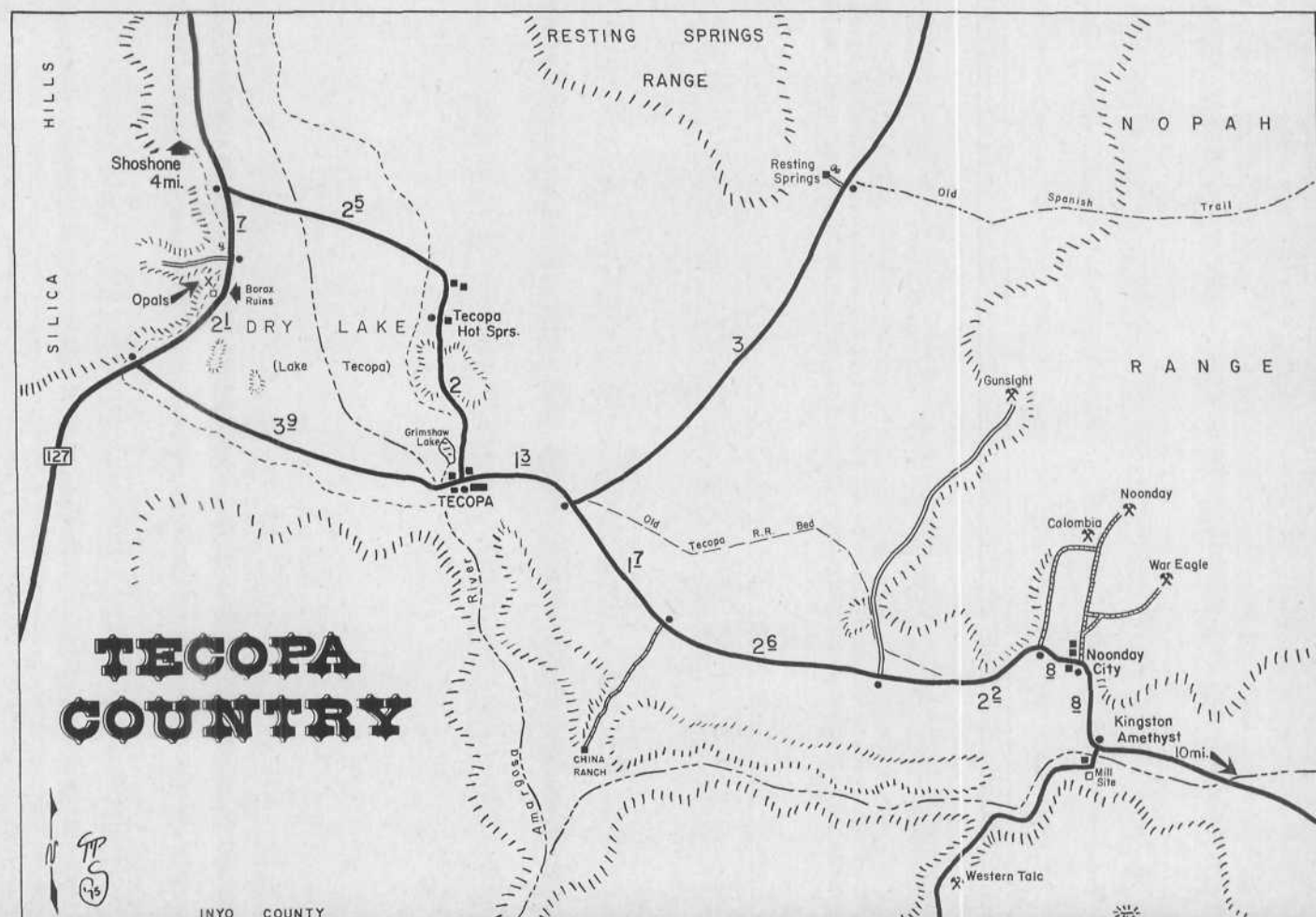
usually small—toothpick to pencil size—and they are extremely hard to remove from the matrix. Some larger stones (I have seen several the size of a quarter) do occur here and they are beauties!

Many methods of removing the opals from matrix have been tried with varying degrees of success. Attempting to pry them loose only results in breakage. The method which seems to work best is to saw away as much matrix as possible, then carefully grind down to the opal.

Good campsites will be found in a canyon near the opal deposits. Supplies and gasoline (hopefully) are available at Tecopa.

Tecopa Country is rich in sweet desert air, scenic beauty, warm mineral springs, gems for collectors, plus exciting trails and historical sites for back-country exploring. During the winter months a warm sun reflects from the barren hills. It is good to bask in its warm caress while storms battle the land you have left behind.

Yes, Tecopa Country seems to have a healing effect. Once again, Old Mother Nature has provided a unique resting place to revitalize Man's body and soul. □





AS A TRIBE, desert biologists are a doughty lot, accustomed to surprises and upsets in their thinking. This is mainly because they are dealing with animals who, up against a near-lethal environment, have developed offbeat characteristics and ways unusual in their kind in order to survive. A fine case in point is the Yucca Night Lizard eclect *Xantusia vigilis* (*Xantusia* in honor of John Xantus who in the 1850s found the first specimen at Fort Tejon, California, and *vigilis* for night-awake).

For his size, this little lizard has wrinkled many a scientific brow. Tail and all he measures only about 2.56 inches, and is dressed quite modestly in smokey grey. Unlike most lizards seen legging it about

in the desert sunshine, he hides by day, coming out only at night. Now this is odd behavior, for lizards, being unable to regulate their temperatures very well, need the warmth of the sun to get them going, and are sluggish until, by basking, they succeed in soaking up enough heat to start activities.

In addition to crossing up clan rules by operating at night, *Xantusia* stays open for business the year around, for even though the cold weather calls for hibernation and other lizards have duly retired for the season, he's active. As all hands know, winter in the Mojave at altitudes around 3600 feet can get cold. The summers there also can be very, very hot and very, very dry, and things generally

Opposite page:
Old yucca debris
are home,
sweet home to
the desert night
lizard.

Photo by
Fred Hawkins.

Right: The
night lizard
enlarged to more
than double
life-size. Photo
by George
Service, Desert
Expeditions



DESERT NIGHT LIZARD

by K. L. Boynton

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are very tough. Still, if *Xantusia* and his kind can find the right living conditions they may flourish to the tune of an estimated 12,000 per square mile, which in anybody's books, is pretty good living.

Right living conditions according to *Xantusia* taste are provided by the tree yuccas (*Yucca brevifolia*), known also as Joshua trees, and after these desert giants have tumbled down at that. For it is in piles of broken limbs and decaying leaves, under fallen logs of these trees that *Xantusia* and his kind take up residence, quite contrary again to the usual lizard behavior which calls for underground holes for desert living. Sheltered then in the moist and decaying debris of yucca trees, well insulated against sun and chill, *Xantusia*

has a fine place to live.

As to be expected, what looks good to one *Xantusia* is going to look good to another and since the best logs and best sites are hard to come by, several lizards may wish to dwell in the same spot. Now it seems that this is all right with one and all in winter, in fact there may be as many as 30-40 lizards congregated in one place, and everybody seems to get along all right. But come spring and the breeding season opens up, things are likely to be very different. The erstwhile gregarious *Xantusias*, pairing off, become quite anti-social. Claims are staked out, territory lines drawn and fighting is in order.

True enough, many another kind of

lizard, under such emotional strain, engages in battles which are mostly posturing and bluff. The *Xantusias*, on the other hand, sail in grabbing and biting and when the desert dust has settled there is a good chance that all combatants will have lost something—a toe, maybe, or part of his or her tail. Now a toe lost is gone forever, but tails can be regrown in time, the period depending on how much was broken off and how good the provender available to provide the wherewithal for growth. Tail losing is an old trick shared by many kinds of lizards, generally considered handy for survival, the owner scurrying away to safety leaving his tail behind to engage the attention of the enemy. Ordinarily the new tail, when finally grown, is obviously a second try job differing in size, scale pattern and generally color from the original. Not so with the *Xantusias* whose brand new tails look so much like the old ones that only an X-ray will show that just a cartilaginous rod supports it instead of the normal tail vertebrae. So bellicose are these lizards, so handy at tail regrowth, that in a given population the chances are better than even money that every adult has lost his or

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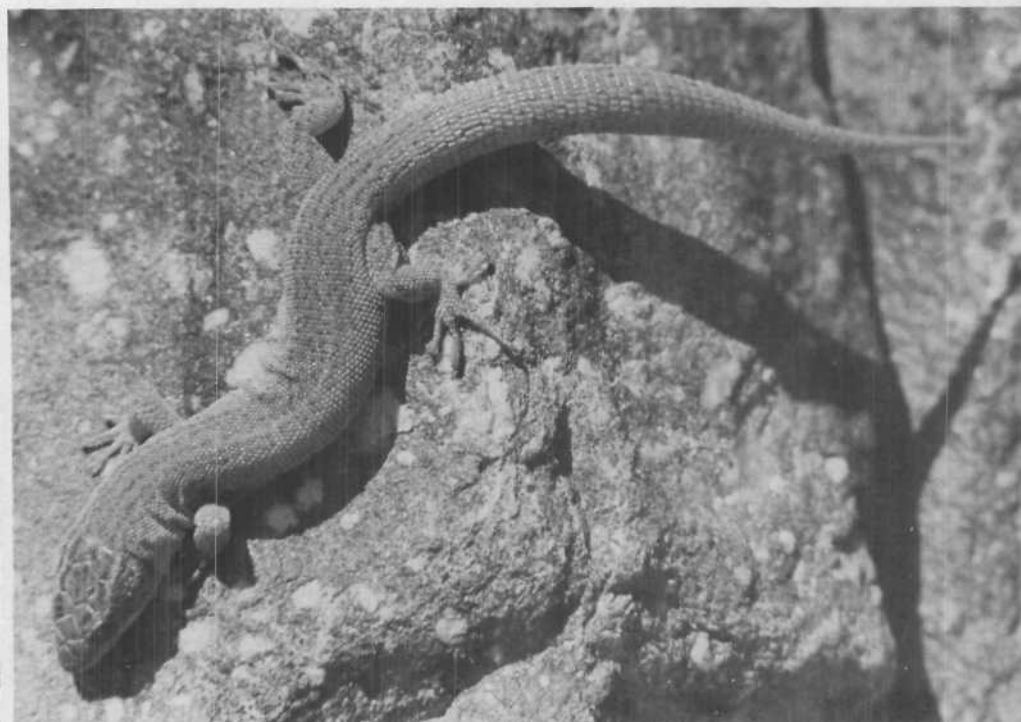
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her tail at least one time—a surprising score.

Once the population has spread itself out so that a single pair occupies a pile of debris, peace descends on the neighborhood and domestic affairs proceed. Again, the Xantusias are not like most lizards who lay eggs, for they bear their young alive. Only one family is on the schedule for the year, and only two youngsters make up the brood. This astonishingly low turnout, plus the fact that the females don't get around to family raising until they are three years old themselves, put the Xantusias in a class by themselves as having probably the lowest reproductive potential among lizards known.

The team of biologists Richard Zweifel and Charles Lowe, studying these lizards in the Antelope Valley area of the Mojave desert, pondered this fact. They compared the Xantusias with *Sceloporus oliveceus*, the spiny lizards and a record holder for high potential reproduction. Mrs. Sceloporus, it seems, breeds at less than a year of age, and turns out four clutches a year, the size of the clutches starting at 11 eggs and increasing up to 24 eggs to a batch when she is three. At that time, if all goes well, she would be the mother of 217 offspring, while Mrs. Xantusia is just getting around to producing her first two youngsters.

The catch is that mortality among the spiny lizards is so high that maybe only 40 of any 1000 eggs make it to one year of age (spiny lizard adulthood) while

chances are excellent that 300-600 out of 1000 Xantusia youngsters will survive the long three years to their maturity. Some of this is what Mrs. Sceloporus gets for laying her eggs and forgetting all about them, for many never hatch and the lucky hatchlings that do have to shift for themselves daytimes, and are picked off by predators in considerable numbers. Young Xantusias, on the other hand, carried in their mother's body until born, get off to a better start, and since they, too, hide by day, miss getting caught.

Adult Xantusias, too, are well off enemy wise, since the fastest desert predators are day operators. Their main troubles come from the desert night snake who likes the same habitat, but is not abundant, and from the grasshopper mouse who, while not above grabbing off a tasty Xantusia, is such a good hunter he can easily make a meal off of something else. Nor are the Xantusias given to roaming about topside very much, Zweifel and Lowe finding that the farthest any they marked traveled about 1050 feet in three years. Most of their recaptures show that at least 91 per cent of the lizards stayed right where they had been caught and released originally.

Not much information is around on Xantusia courtship. It is known, however, thanks to Malcolm Miller's careful work, that the gestation period is about 90 days with breeding in April and May. The two youngsters make their bow to the world in September, a seemingly inauspicious



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time particularly in dry years since it is still hot and the insect supply apt to be low. Apparently the youngsters subsist on stored reserves left over from their prenatal days, until at last the rains come, and after them the new insect supplies. Still, growth is slow the first year, the young lizards maybe not adding more than 6 mm. to their less than an inch birth length. The second year things pick up, until by the end of the third, full size is obtained, the females becoming larger than the males.

The life span of these lizards is another rocker, for each youngster has a potential of at least four years. A ripe old nine and one-half years has been definitely recorded and eleven years pretty well established. This is remarkable longevity, for while it is true that their normal secretive night life does protect them most of the year, they feed outside daytimes in winter. A dangerous thing to do, not only from the standpoint of exposure to predators, but as Zweifel and Lowe found in checking the temperatures where the lizards are feeding, hazardous from this angle, too. December, for instance, in the Mojave may have a soil temperature under the Joshua trees at about 48 degrees F, the air in the shade two cm. above the ground (lizard level) about 68 degrees F, which are okay, but the surface of the log where the sun beats down directly may be a torrid 109 degrees F. This is much too hot, for these lizards die when exposed to temperatures above 102 degrees F. So, even during winter, the Xantusias move about within inches of potentially fatal temperatures.

Interestingly enough, the nests of desert packrats have a great attraction for these lizards since the rats use the yucca debris as background for their edifices of piled sticks and what not interspersed with cholla cactus. The bristly pile may house several lizards in addition to the rat resident, and when he moves out to another adobe, the lizards continue to enjoy his abandoned palaccio until it finally decays, and collapsing, fails to offer good protection. Then the lizards themselves must move.

With good sites scarce and with the natural sedentary tendencies of these lizards, and taking into consideration how few enemies they have and their success in raising offspring, it would seem inevitable that a given area would experience

a first class population explosion with too many Xantusias gracing the scene. But this is not so, and scientists, pondering this, conclude that what regulates Xantusia numbers here is the good old social antagonism in full bloom most of the year. The most critical time is in the early summer when the heat is steadily growing in intensity. Then it is that the lizards, in fighting to set up their territories, are bound to drive the losers out into habitats that are not as good, and these individuals may not make it in their new places. Or, in seeking better spots, they may have to disperse further away, and hence thin out the local population numbers.

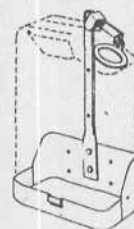
Not that all is beer and skittles for the Xantusias. Being insect eaters and diners on termites, springtails and the like, they are basically dependent on the season's rains, which are what determine how abundant the food supply is going to be. A poor rainy season and the Xantusias show it in slow growth. Lost tails, in taking away that much of a fat-storage organ, make things tougher, since the energy put into tail regeneration can't go into body growth at the same time, the

young lizards showing this particularly.

But what with optimum living conditions amid the yucca debris, average rain at normal times, and by shifting their behavior from gregarious clustering in winter to anti-social belligerency in spring and summer, the Xantusias get along just fine in a desert known far and wide for its inhospitality. □



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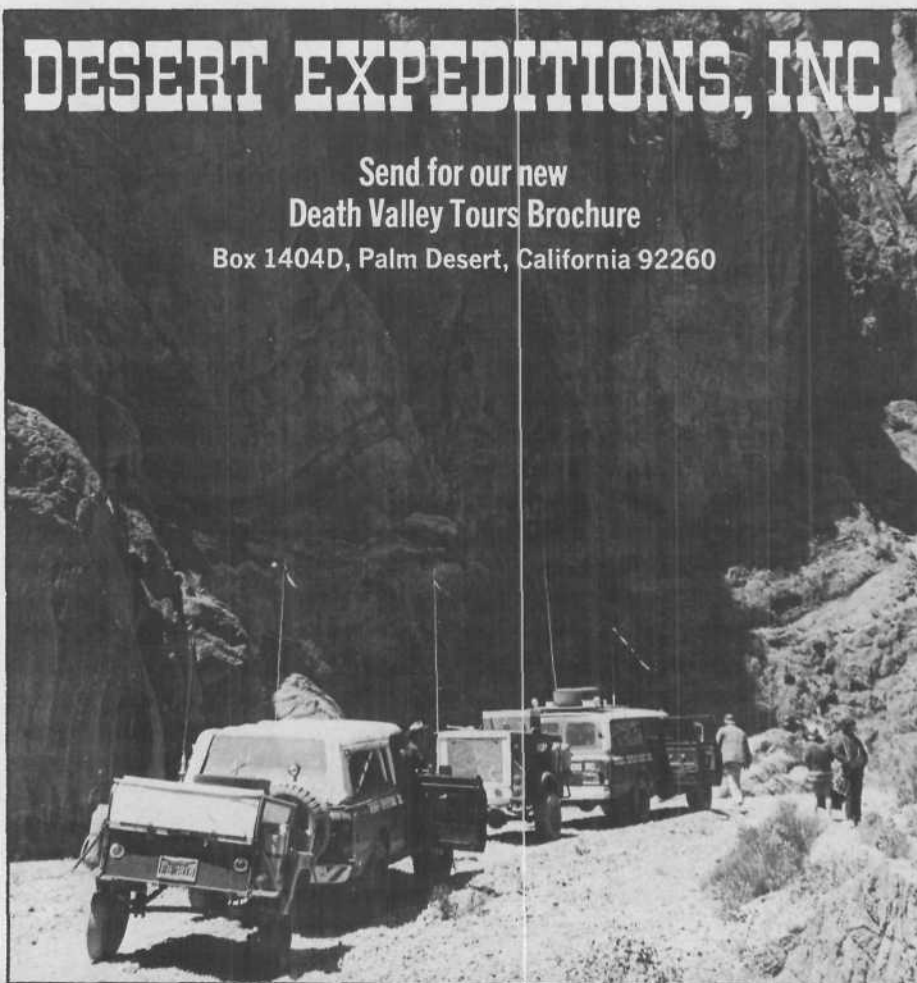
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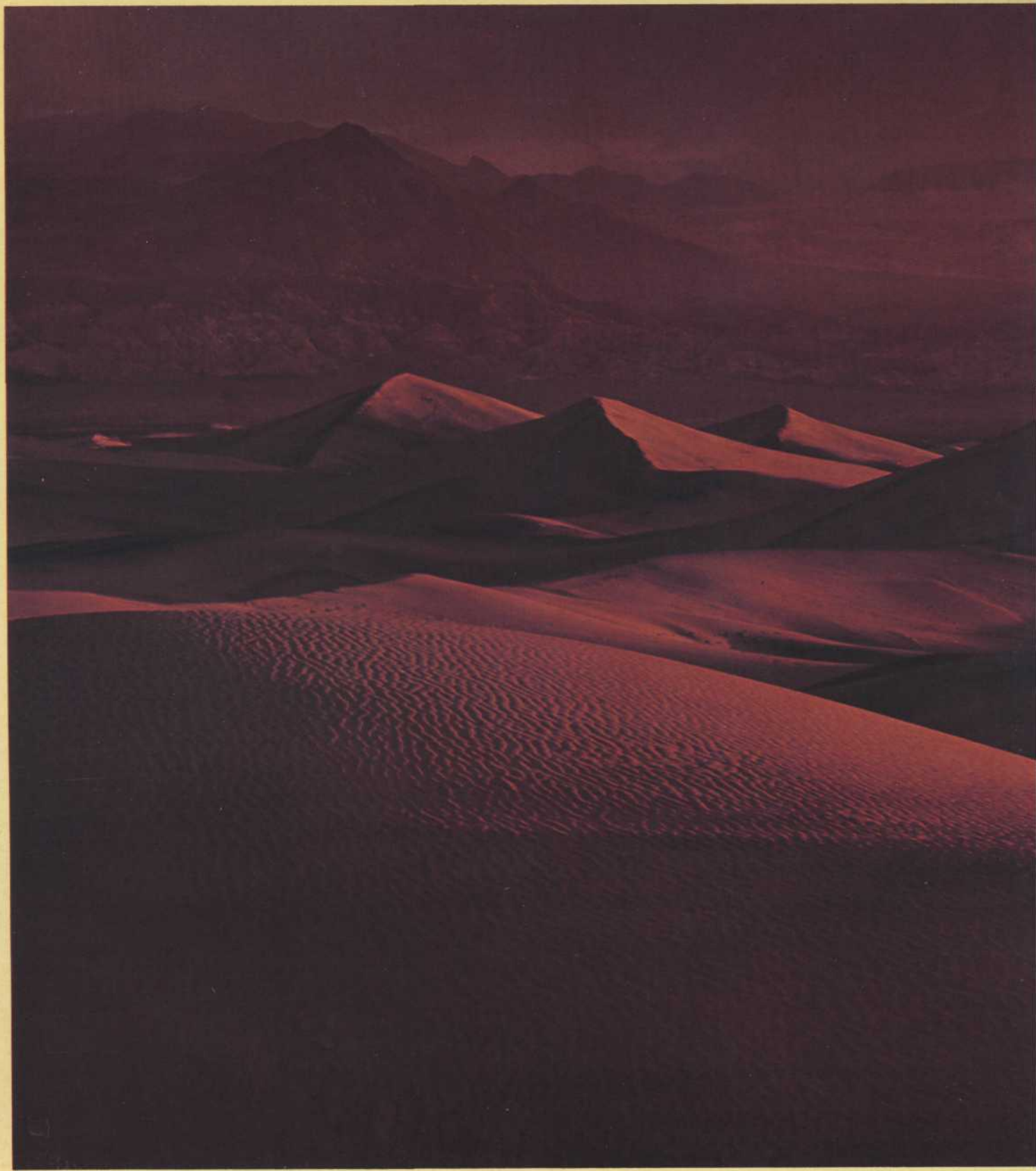
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Sunrise Moods



An Incident of Memory

by
Helen Walker

by David Muench

THE LAND was hostile, unmapped by man, deserted by wild game, and inhabited by but a few renegade Indians. Those who dared to trespass endured privations, sacrificed their worldly possessions, and gambled with their lives. Their motivation was gold — their destination California.

Assemblages of wagons and livestock occurred at Great Salt Lake, Utah Territory—the date was November 1849. Time had been forfeited by those inexperienced in this mode of travel. Now, to proceed west, over the Sierra Nevada mountains, was a calculated risk. Snows were due any day, and drifts to 20 feet could be expected. Wagons must travel south, into

Scouts brought news of a pass the following day, and the few remaining wagons rolled without hesitation. Bennett's outfit was among them.

At the first night's campfire, a meeting was held for reorganization. The experience of the past days had forewarned the single men that there were drawbacks in traveling with family wagons. They no longer wished to be obligated; they planned to travel on ahead, alone—hoping to make up the precious lost time. Reverend Brier stated that he did not intend to be left behind with the stragglers—he would follow the tracks of the unattached men.

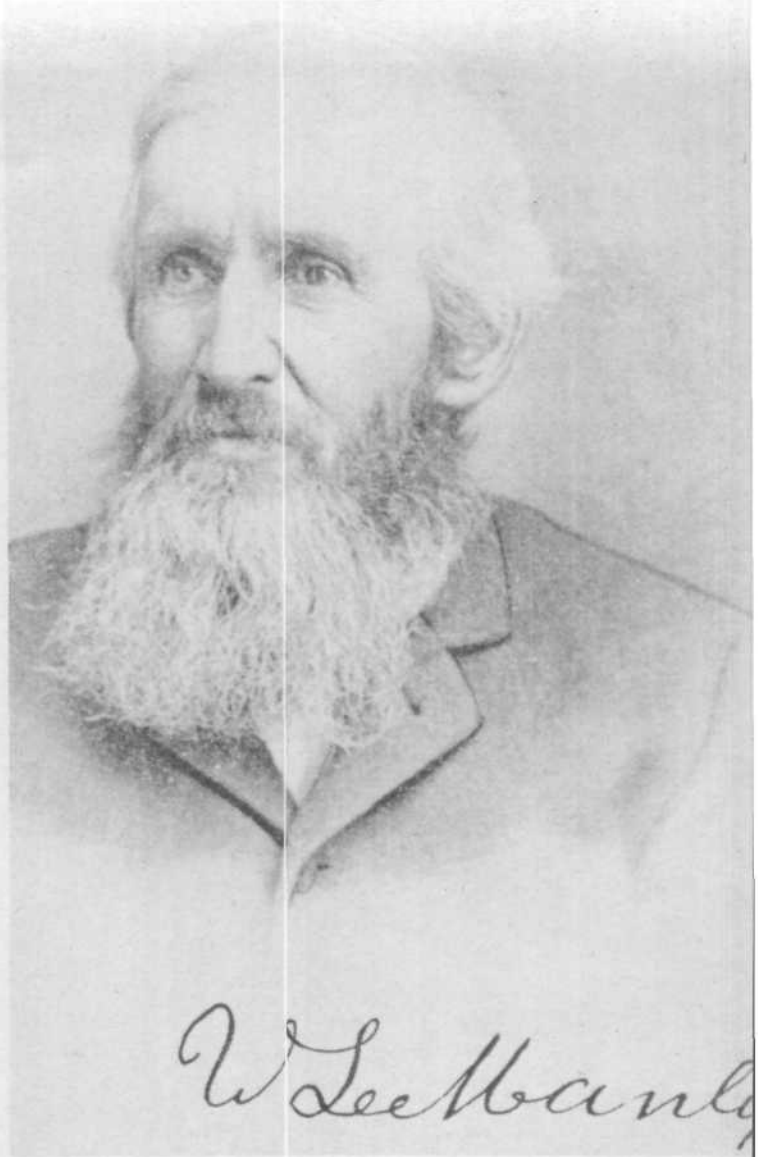
During the days that followed, the remaining wagons grouped together, their speed being a determining factor. Traveling with the Bennetts were the Arcanes, Wades, and those who shared their mess. They traveled south along the eastern rim of the Amargosa, crossing the desert through its center, in an east to west direction. The ground was hard, rocky, and the arid climates produced only sparse shrubs. The stock suffered from lack of water and green feed—their bodies became gaunt, their feet sore and broken.

As was Manly's habit, he scouted ahead, often several days at a time. First indication of the other parties' whereabouts became apparent when he discovered a dead ox along the trail. With his sheath knife, he cut a long strip of meat from the carcass and relished it raw. The hunger that gnawed at his belly was now quieted.

Following the impressions of wagon tracks, Manly walked down what we know today as Furnace Creek Wash. He first encountered Reverend Brier and family who were still in pursuit of the single men. Further north, a column of smoke lead Manly to the camp of the advanced party—they were a discouraged lot. Their group, Manly learned, had attempted to cross the salt beds beyond the mouth of the wash, but were forced to retrace their tracks. Their oxen had become so weak that they could no longer bear the burden of the wagons. Their unanimous decision had been to kill the oxen, then burn the wagons for fuel to dry the meat. They, who now call themselves the "Jayhawkers," would proceed on foot.

Before the sun spread its light on the valley, Manly was on the trail back to his wagons. He stood for a moment at the mouth of the wash in surveillance of the vast waste. Would this arid land that

*William
Lewis Manly.
Photo courtesy
California
State
Library.*



spread between two ranges of foreboding mountains bring an end to his dreams—devour the lives of those dependent upon him? His heart was heavy with despair, as he moved again toward those who awaited his return.

Anguish showed in the faces of those around the campfire. Their bodies appeared parched from exposure and lack of water. Small children cried, and were not easily comforted. They, too, had slain an ox for food, but its flesh did not offer much nourishment. It was painful for Manly to add to their misery for he could offer no hope, just more suffering to be endured.

Wagons moved forward at dawn. They entered the long valley, then turned northwest, past where the Furnace Creek Inn stands today. Their camp that night was made near a clump of mesquite which offered little in relief.

On the west side of the valley the following night, a good spring quenched their parched throats. Those who had read "Fremont's Travels," felt certain this was

the range he told of—one which separated the dry arid land from the fertile valley of California.

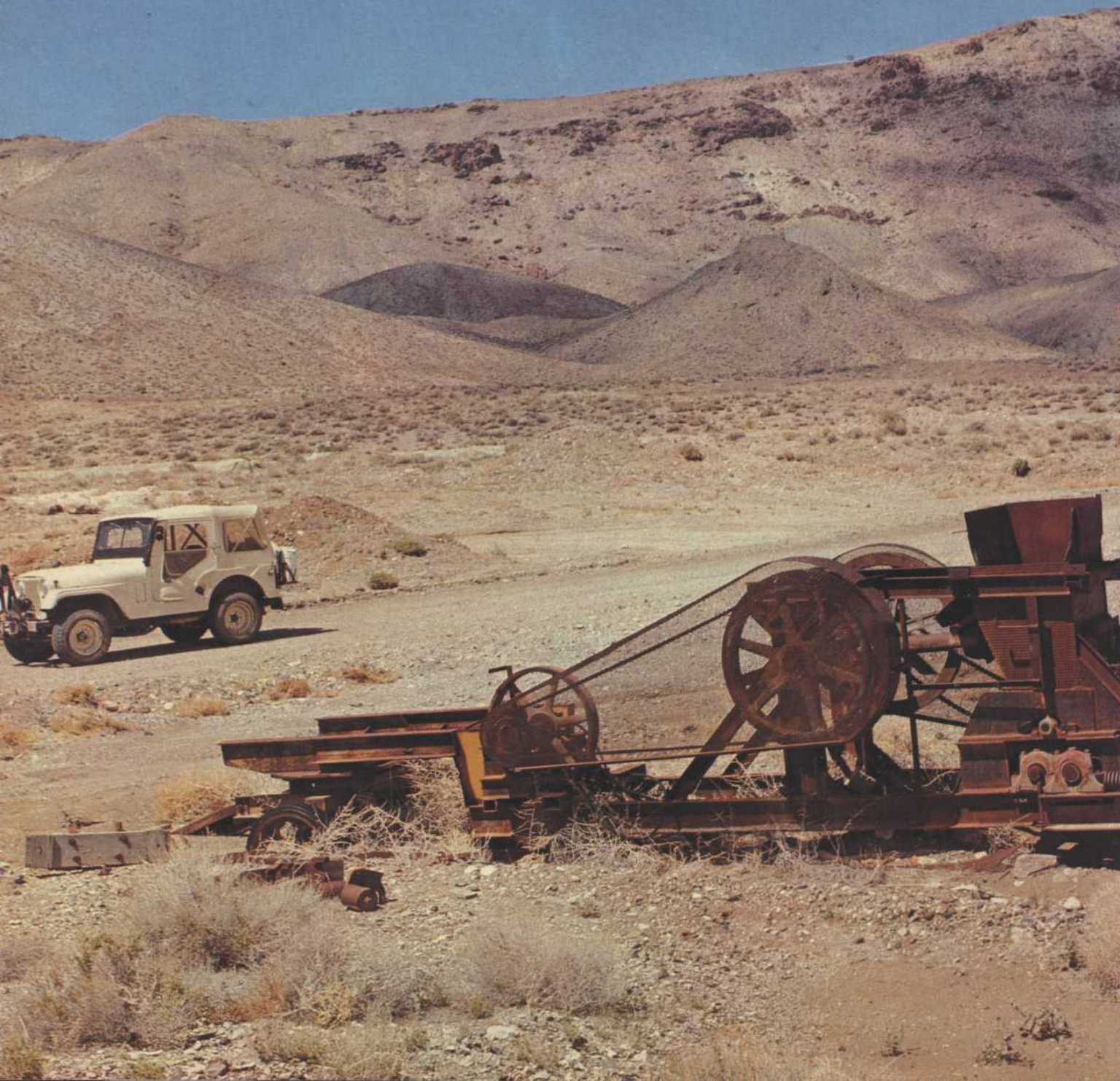
Manly scouted several canyons—wagons made regretful attempts on their own—no pass was found. Two of Bennett's team drivers deserted, and two of Arcane's joined them. Finally, Bennett made a decision. "Our only hope for survival," he told the others, "is to send someone ahead for aid." He continued, "we who are left will return to the good spring and wait. Surely it could take no longer than 10 days!" Bennett asked Manly to make the trip, and perhaps, John Rogers, a tall, lean young man from Tennessee, would accompany him.

In preparation, an ox was slaughtered, and the meat dried and packed. A few precious ounces of flour and rice were spared. Rogers would carry his shotgun, and Manly accepted Bennett's offer of his seven-shot rifle.

At the first emergence of light, Roger and Manly embarked on their journey.

Continued on Page 44

The Loneliest Road



DEATH VALLEY is a north-south valley in California's most inhospitable desert country—mean and low-down, in a country of north-south valleys, all of them almost just as mean and low-down.

Only Death Valley, because of what happened there, is a sort of king of California desert locales. It sinks down into the floor of the earth to a minus 282 feet near Badwater, and Badwater is so bad that I can't remember anyone in modern times foolish enough to sample the broth.

By summer Death Valley gets as hot as the bottom of a frying pan on a mesquite fire. Once, according to the records, it reached 134 degrees at a weather station in the National Monument. Wiser heads said that 134 degrees only *hinted* at how hot it really got, that something like 160 degrees might be closer to being accurate. People have died of the heat in Death Valley, then and now, and while the Monument is open in the summertime, most of the side roads are closed—simply because they cannot be patrolled by the Monument's skeleton summer staff. There are side roads where the summer explorer can get into a mess of trouble. A car

A desert road

that begs to be taken...

offering a variety of charms

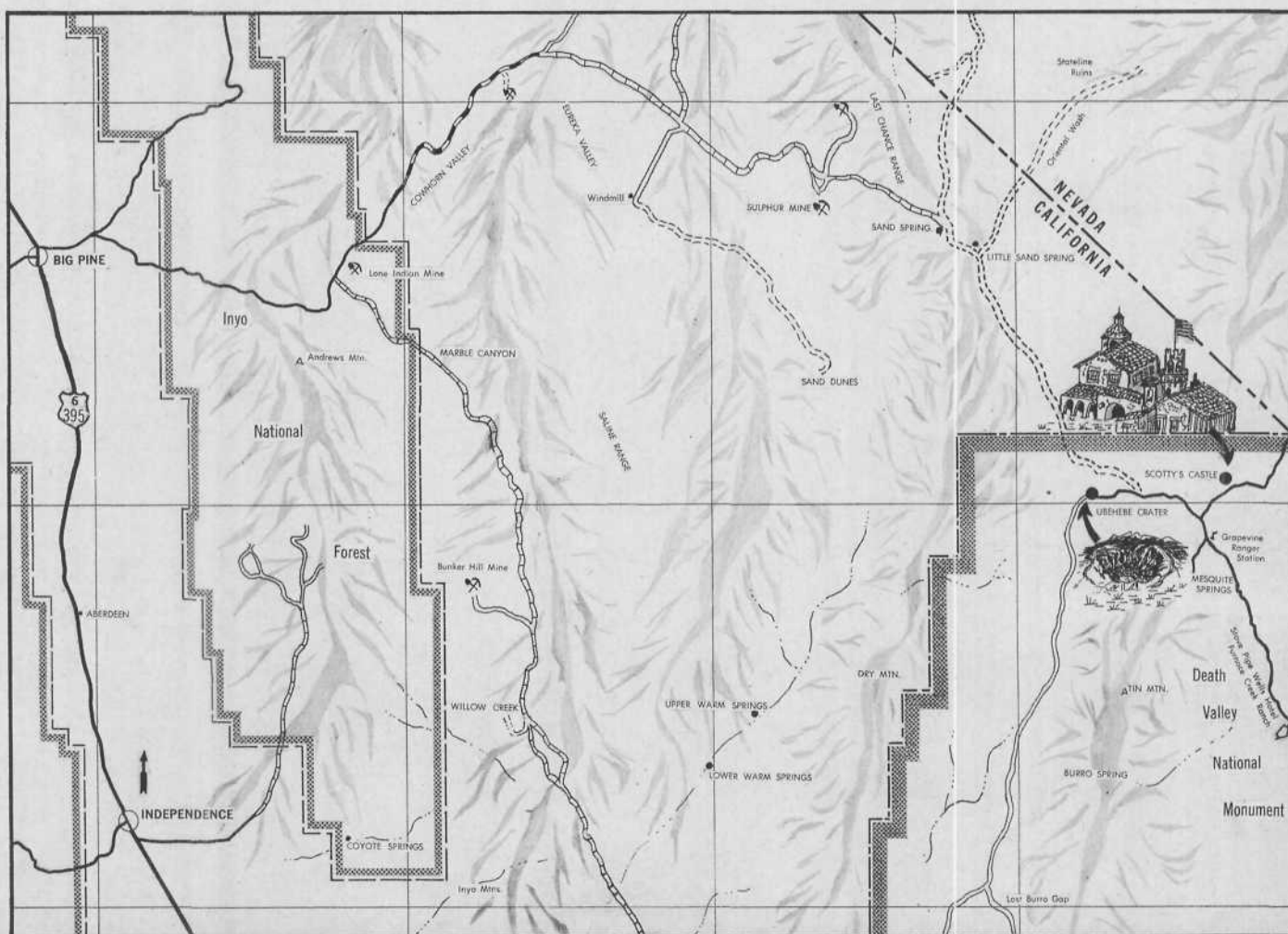
breakdown, running out of water, walking for help in the noonday sun, all spell trouble.

Still, Death Valley has other seasons than summer, and other persuasions than mean and low-down.

And there is a side road adventure, another way of getting there that few know about and fewer still have driven. This in the lonely Eureka Valley route and it begs to be taken—it begs to be taken if you have been to Death Valley before

but never heard of this route, and it begs to be taken if you have never been to Death Valley at all because it is *special*, something set aside as a kind of reward for waiting. It is a byway exploration adventure in California you will never forget.

Death Valley is an exuberant place by winter and spring. It manages, with great effort, to siphon off some rain from the boiling storm clouds that frost up the top of the Sierra Nevada and the Panamint





One little ... Two little ...

Three little owls came out for a view,
Along came a chicken hawk, and then
there were two.

Two little owlets, preening in the sun,
Along came a rattlesnake, and then
there was one.

One little owl, all alone and sad,
Along came Hans Baerwald, and made
us all glad.

Desert Life

by Hans Baerwald



and Inyo and White Mountains off to the west. With this little rain, Death Valley each spring arranges a wildflower show, staged, conducted and presented with nature's almost careless extravagance. When nature is profligate you'll see flowers in bloom in Death Valley you probably have never seen anywhere else in the country; you'll see them in such massing that you'll be boggled.

Death Valley is mean and low-down, but it is also poetic and pastel, phantom and fairyland-like. You can run your string out in either direction as far as mood is concerned in the Monument. On a wintry day, among the mesquite hummocks near Ash Meadow, I once felt as melancholy as if all the heartbreak of the forty-niners had been distilled and poured over me; in the sand dunes near Stove Pipe Wells, on a similar wintry, windy day, I have found the salt sand running, making incredible patterns of light and dark, fluid geography, and I felt exalted by the uncommon show.

Moody people should go to Death Valley—the blase should stay away. Go there with your pores open. The moods are what make the faithful come back and come back, seeing the same things over and over and not really seeing the same things twice at all.

A few years ago a new road was hacked and chewed and bladed into Death Valley. In a land of north-south valleys, the road travels along a lateral depression, an east-west valley. Not many of these exist and this one links the Owens Valley with the Monument.

This special side road starts in Big Pine, in the once cultivated, now water-depleted Owens Valley. It starts up over a shoulder of what builds into Westgard Pass, but it doesn't follow all the way on that route. Instead, it ducks off to the south and seems to seek Saline Valley. But once the head of Saline Valley is gained, the new road shies to the north a notch, drops down into Cowhorn Valley and runs through that winter-beautiful vale into Eureka Valley proper. Once across these barrens the road has but to corkscrew up and over the Last Chance Range and then drop steeply into Death Valley Wash. South then and Death Valley opens.

Why didn't someone think of it sooner?

First off, it's country that invites few

roads. Some of the old ones have been remodeled and straightened. But new roads are not all that much in vogue. And since it has opened, not many people know about the Eureka Valley route into Death Valley. Fewer people still take it because the route is remote and lonely (you'll go close to 100 miles without seeing a sign of a modern convenience), and it, like the parent destination valley, has a strong mood on it.

The road is not paved. Not all the way. Into Cowhorn Valley, yes. Beyond that, no.

Still it is a good *dirt* road and the only time you need be a little concerned about it is right after a gully-buster storm. While it is an Inyo County road, it isn't always easy to get information on the byway. Recently, after a sort of winter cloudburst that dropped an inch and a half of water into normally arid Death Valley, I called all the agencies I could think of in Inyo County, asking for road conditions.

It's just that few people venture into the region and neither the road department, the sheriff's office or the highway patrol could advise me. Even the nearest ranger in Death Valley National Monument did not know the condition of the road that entered his preserve. "All I can tell you is that we had a lot of rain up there," was what he said.

Armed with a complete lack of information, and a bounty of faith, we entered the area, drove the route, encountered a few mud puddles and had no difficulty at all. The moods were there. The mystique was working. The legends and history were still in place, Eureka Valley hadn't suffered a bit for its lonesomeness. In fact it grows fat on it.

The histories of Inyo County still list as unsolved mysteries the disappearance of two civilian guides when Eureka Valley was first probed in the summer of 1871.

A survey party under First Lieutenant George M. Wheeler, Corps of Engineers, U. S. Army, and headed by Second Lieutenant D. A. Lyle, Second United States Artillery, struck west from Camp Independence into the totally unknown tangle of mountains and deserts.

Lyle's assignment was to determine if a route could be found "directly to the eastward over the sterile deserts and mountains intervening between the Amargosa and Owens Rivers that was possible for a large train of men and animals." The



An Unusual Book About Death Valley

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VALLEY'S
VICTIMS
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Chronology,
1849 and 1966)

By
Daniel Cronkhite



This book is a collector's item, and there are only 225 numbered copies available.

The author explains that this book is not intended to be saturated with gory detail and that the treatise is not an attempt to be "the final word" on the subject.

The valley was held to be a virtual pit of death in the earlier days, hence its name, but with the founding and development of springs and wells, the danger was lessened.

Air conditioning at Furnace Creek and Stovepipe Wells, and in automobiles has made becoming a statistic seem impossible to the casual visitor. However, a summer day, if one is traveling on foot, is still a matter of concern, and dying under a summer sun is not a pleasant ordeal.

Though the verbal content and photographs in this book are of historical importance, the author believes there is great value in the fact that *Death Valley's Victims* was set up by 19th Century standards and printed on "obsolete machinery." Every letter has been set and justified in a composing stick by the author. "However," he states, "we were forced to succumb to the use of offset printing in the reproduction of the photographs."

In addition to its other fine qualities, *Death Valley's Victims* is hand bound. "Sagebrush Dan" Cronkhite fully intends to continue publishing limited-edition material in the field of Western Americana, and deal in rare and out-of-print books.

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The trail climbed over the Salinas Range, "a rocky, volcanic defile," that separated Saline Valley from Eureka

Chalfant repeats the arguments offered in Owens Valley when Lyle's party returned: Lyle had made no effort to find



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Hahn. There were rumors that Hahn had failed to find water and had deserted, but many pointed the finger of guilt at Lyle. The temper of the valley residents ran even higher when on his next foray toward Death Valley Lyle lost another guide, another solid Owens Valley citizen, William Egan.

Chalfant writes: "While Wheeler and Lyle were both characterized as brutal and overbearing . . . the blame in both cases was Lyle's."

From that time, Eureka Valley has always been held in a kind of morbid, melancholy respect by oldtimers in the Inyo Valley. And exploration in the area, and development, was slow.

There is a fantastic natural landmark in Eureka Valley that will one day become famous. It will when the road is paved all the way there. It is possible in cool weather and when the road isn't muddy to get to this giant sand dune tucked away in the south of Eureka Valley in a passenger car. It is possibly the largest single sand dune in the state. It is easily 800 feet high, probably about seven miles around at its base. There was a time when you could pick up arrowheads by the "bucketsful" around the sand dune. Today, if you look hard, you can still find a few. The last day I called, an archeologist had found three points in a half hour's tramp.

A word of warning: Eschew the sand dune exploration in the summer unless you are completely confident of your ability to handle yourself in the desert under such conditions, and such confidence should be based on experience, not bravado. Stay on the road—don't mess around with sandy spots.

Time was when the desert people buried plastic jugs of water near the big sand dune, because tourists would get stuck in the sand there once in a while in the summer, and extra water can save lives. The Eureka Valley road is not patrolled, neither is it hazardous. It's just damned lonely.

Once across Eureka Valley, and up in the Last Chance Range, you'll come to the El Capitan quicksilver mine and a collection of old sulphur mines. At the El Capitan site is a straggle of old weathered wooden buildings, not that old but old enough to be photogenic and hint at least of a remote mountain ghost camp. It's quite deserted and the winter wind that picks through here sings in a minor key.

You've come through Hanging Rock Canyon, crossing the Last Chance Range, and you drop steeply into Death Valley Wash and onto a really superior dirt road that runs straight south, through spring explosions of all manner of wildflowers and blooming cactus to Sand Spring with its sentinel cottonwood, a pond and frequently migrating waterfowl, on down into the north end of Death Valley, pavement at last, between Ubehehe Crater and Scotty's Castle.

You'll climb up out of Big Pine to an elevation of 7450 feet before descending into Cowhorn Valley. By winter you can find snow here. It only adds to the lonesome beauty of the place. Crossing the Last Chance Range you'll climb again to 5200 feet. The mileage across from the start of the Westgard Pass road just out of Big Pine to pavement near Scotty's Castle is right at 100 miles.

The wintry day we drove it last—except for some arrowhead hunters and biologists we found off on the side road at the sand dune—we did not meet or pass or see another person. We had the entire desert domain all to ourselves for a day, for a hundred miles. There are few places in California today where you can drive for a day, for a hundred miles, without seeing another car or person.

That, simply, is the delight of this road that knits civilization with legend and history and mood and loneliness. Along the route is beauty in its various isolated persuasions.

Death Valley, mean and low-down, is neither when you enter it by a route that offers mountain mahogany hung with snow, wind-washed sand dunes, prehistoric arrowheads gleaming in the sun, a ghost camp with gale-sandpapered wood, and wildflowers by the long mile. ☐

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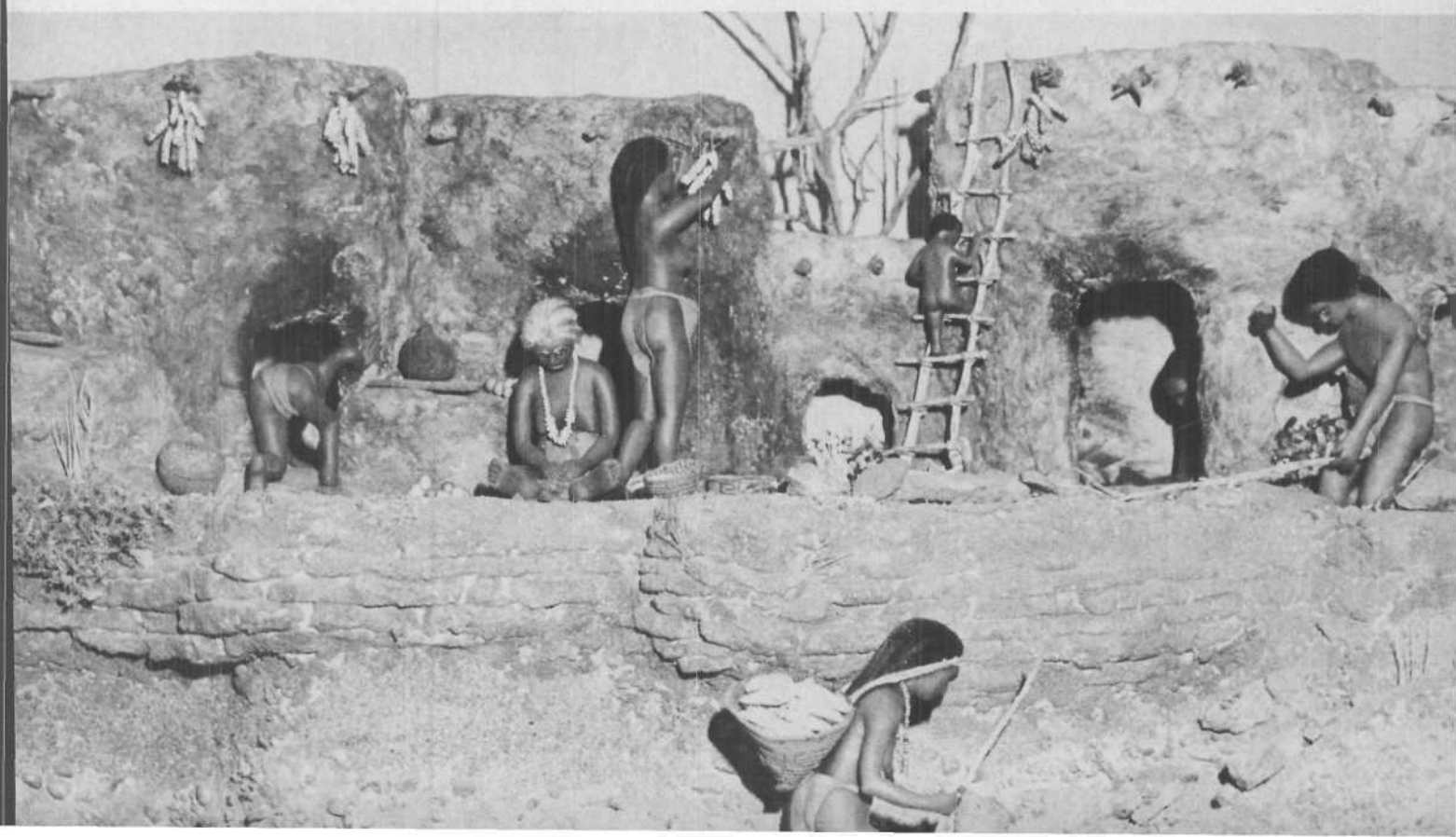


*A portion
of the life-size
wax creations
which were
completed in 1966.*

NEVADA, THE Silver State, is a land rich in colorful history. Nowhere is that history better described than at the Nevada State Museum at Carson City.

The Museum is housed in the building which was once the home of the famous 'silver dollar' U. S. Mint. Today it provides the visitor with a wealth of information and room after room of fascinating displays. These displays range from the prehistoric to the historic, from the paleontologic to the nearly modern. The chronicle of all of Nevada's people, from the early American Indians to the miners at Virginia City, are vividly portrayed through artifacts and dioramas. Several large rooms are dedicated to the display of the past and present of Nevada's wildlife.

The museum has four floors or levels. Each floor is divided into sections devoted to specific topics such as wildlife, mining, firearms, etc. Entering on the street level,



by
**Tom
Baugh**

the visitor progresses upward through three levels following a numbered route.

The entire theme of the Nevada State Museum is 'life size.' Even those dioramas which are built on a miniature scale are perfect and convincing in every detail. Without a doubt, each person visiting the museum leaves with a different impression. Some are impressed by a particular display and others with the obvious attention to painstaking detail and historical fact.

The most realistic and effective presentation, however, is located on the second floor of the historic structure. Surrounded by wall displays of American Indian artifacts is a glass case housing a full size scene from the daily life of a Great Basin Indian family of several centuries ago. The figures are constructed of wax. The diorama is a work of art performed by the Stuberghs and financed through funds provided by the Max C. Freischman Foundation. The Stuberghs, using human models from the Pyramid Lake Indian Reservation, completed this remarkable work in 1966. Since that time, it has undoubtedly become the most popular exhibit in the museum.

The final exhibit is located in what was once the basement of the mint, but is now a tour through a simulated mine of Nevada's fabulous silver era. The rock walls and timbers combine with ore cars and mining equipment to produce a convincingly realistic experience. At points along the tortuous tunnel, the shaft opens into life-size scenes of hardrock miners engaged in their tasks deep within the heart of the earth.

The Nevada State Museum is located on U. S. 395 in the center of Carson City, and is open daily from 8:30 a.m. to 4:30 p.m., admittance is free. Camping facilities are located north of Carson City in beautiful Washoe Valley and to the west at Lake Tahoe. Both Carson City and Reno, a short 40 miles to the north, boast ample hotel and motel facilities as well as excellent restaurants.

A tour through the Nevada State Mus-

PAGES OF THE PAST

eum is a good start for a more comprehensive tour of the many historic locations scattered throughout the area. Virginia City, Goldhill and other restored boom towns are only a short drive along State Highway 17 from either Carson or Reno.

Whether you are touring Nevada in depth, or just passing through Carson City, you will find a fascinating experience waiting for you when you explore the pages of the past in the Nevada State Museum. □

*Opposite page:
A scene from one
of the many
dioramas
depicting life in
an Indian village.
Right: The
imposing structure
of the Nevada
State Museum
in Carson City.*



THURSDAY, NOVEMBER 8

7:00 p.m.—NATURALIST TALK. Museum and Visitors' Center, Furnace Creek Ranch.

7:30 p.m.—CAMPFIRE across from Stovepipe Wells Village.

SPECIAL EVENT—Banjo Contest. Outstanding strummers of the West will attempt to outstrum their competition. Community sing and other entertainment.

9:00-11:00 p.m. — DANCING UNDER THE STARS at Stovepipe Wells Village. Enjoy Square and Modern-Social dancing.

FRIDAY, NOVEMBER 9

6:00 a.m. — SAND DUNES PHOTO SHOOT. Techniques of Sand Dunes Photography with props and models. Coffee and donuts. Bring camera and plenty of film.

8:00 a.m. — HISTORICAL BREAKFAST, Stovepipe Wells Village, Price \$1.85. Featured speaker will be L. Burr Belden, author of Goodby Death Valley and many other books and articles about this valley.

8:00 a.m. —HOOTENANY BREAKFAST, Furnace Creek Golf Course, Price \$2.25. For the fifth year our performers will be in tip-top shape for an old fashion—HOOTENANY HOEDOWN.

10:30 a.m.—CONDUCTED TOUR. Tour to Ubehebe Crater, Scotty's Castle and North End points. Starts at sign on main road, north of Visitors' Center. Your car.

TRAIL RIDES—One terminating at Furnace Creek, the other at Stovepipe Wells Village.

12:00 Noon—Arrival of Riders of 3rd Annual Desert Trek at Blacksmith Shop, Stovepipe Wells Village. Much excitement and colorful camera opportunities in unique setting.

12:30 p.m.—Arrival of pony-drawn covered wagons at entrance to Furnace Creek Ranch. The self-contained wagons will be home for riders ranging from 8 to 80 years of age. Lavern Gentert, Trail Boss.

1:30 p.m.—Arrival of Riders of the 12th Annual Death Valley Trail Ride at entrance to Furnace Creek Ranch. Co-sponsored by the Equestrian Trails, Inc. and Death Valley '49ers, Inc. Fifty riders will cover the 125-mile historic and scenic route from Ridgecrest by way of Indian Wells Valley to Death Valley. The Trail Riders will group for 30 minutes in a staging area in front of the main entrance to Furnace Creek Ranch. Harold and Sylvia Hughes, Co-Chairmen.

7:00 p.m.—NATURALIST TALK. Museum and Visitors' Center, Furnace Creek Ranch.

7:30 p.m.—CAMPFIRE, Texas Springs. Our venerable Captain Gibson, former mule skinner and station agent on the Tonopah and Tidewater R.R. will regale us with a few anecdotes of early days in and around Death Valley.

9:00-11:00 p.m. — DANCING UNDER THE STARS at Stovepipe Wells Village (Modern-Social).

9:00-11:00 p.m. — SQUARE DANCING UNDER THE STARS. Furnace Creek Ranch near the pool. Dance to the calling of Darrell Marsh of Bishop, California.

SATURDAY, NOVEMBER 10

8:00 a.m.—PHOTOGRAPHERS' BREAKFAST, Stovepipe Wells Village, \$1.85. "Photographing Wildflowers—How, Where and When." Noted photographer, Curt Armstrong, will show prints and explain easy methods of taking pictures of flowers of all sizes.

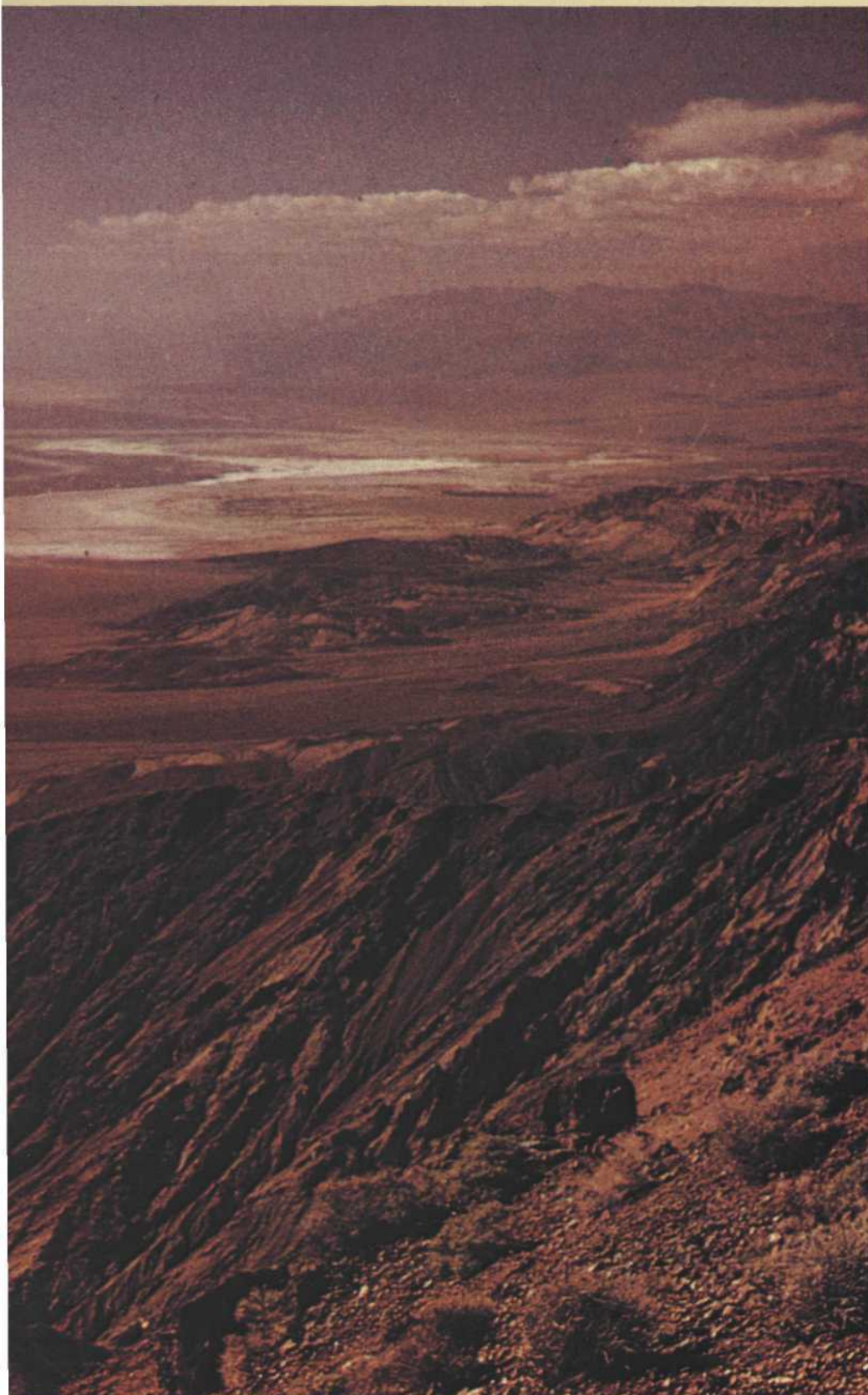
8:00 a.m.—AUTHORS' BREAKFAST, Furnace Creek Golf Course. Price \$2.25. Our featured speaker will be LeRoy C. Johnson. In January, 1973, Mr. Johnson, after research and study, actually walked the route taken by Manly and Rogers in 1849 from Travertine Spring in Death Valley to a ranch near present-day Newhall, California.

24th ANNUAL DEATH VALLEY

The Valley floor from Dante's View by Dr. Hans Baerwald.



ENCAMPMENT PROGRAM



HIKING EVENTS—Two interesting hikes have been planned. Both hikes are designed to give a new sense of values about Death Valley—visiting locales rarely seen by tourists. The walks are not strenuous. Hiking boots, full canteen, and sack lunch are required. A broad-brimmed hat is recommended. Transportation will be pooled.

8:30 a.m.—ENCAMPMENT HIKE, Salt Creek Traverse. The 6-mile hike passes through the south end of the Devil's Cornfield, follows the course of Salt Creek—with its below sea-level waterfall, migratory waterfowl and desert pupfish. Meet on State Highway 190 at Devil's Cornfield where car shuttle will be arranged. Bring canteen, lunch and stout shoes.

10:00 a.m.—CONDUCTED TOUR. Middle part of the Valley. Starts at sign on main road, north of Visitors' Center, ending at Stovepipe Wells Village in time for the Chuck Wagon lunch. Your car.

12:00 Noon—CHUCK WAGON LUNCH. Stovepipe Wells Village, \$2.25. Served Western Style from an authentic Chuck Wagon.

2:00 p.m.—BURRO FLAPJACK SWEEPSTAKES, Stovepipe Wells Village Area. A dozen prospectors, as stubborn as their burros, compete in an unique, hilarious race of man and beast. Around a center pole they go! Pushing, pulling, hootin' 'n hollerin', even carrying the burros if need be! The first burro to eat a flapjack determines the winner.

7:00 p.m.—NATURALIST TALK, Museum and Visitors' Center Auditorium.

7:15 p.m.—EVENING ASSEMBLY, Park Area, North of Golf Course Road, Furnace Creek Ranch. Bring your own chair. Special Presentation: "Wildflowers of the Southwest" by Curt Armstrong.

8:30 p.m. — 10th Annual Old-Fashioned Fiddlers' Contest Follows Evening Assembly—same location. Features the best Fiddlers in the West competing for cash prizes.

9:00-11:00 p.m. — DANCING UNDER THE STARS at Stovepipe Wells Village (Modern-Social).

9:00-11:00 p.m. — SQUARE DANCING UNDER THE STARS, Furnace Creek Ranch near the pool.

SUNDAY, NOVEMBER 11

7:00 a.m.—PROTESTANT SUNRISE SERVICE, DESOLATION CANYON.

7:30 a.m.—CATHOLIC MASS — Visitors' Center Auditorium.

8:30 a.m.—ENCAMPMENT HIKE, Gower Gulch to Valley Floor. This 2½ mile walk takes us down Gower Gulch, near Manly Beacon, past old borax ratholes and into Golden Canyon, eventually winding up on the Badwater highway. Assemble at bottom of hill below Zabriskie Point overlook, with canteen, brunch and stout shoes.

8:30 a.m.—ARTISTS' BREAKFAST, Furnace Creek Golf Course, Price \$2:25. Watch the creation of a new western painting by leading western artists. View the development of a portrait of a prominent '49er by a leading portraitist.

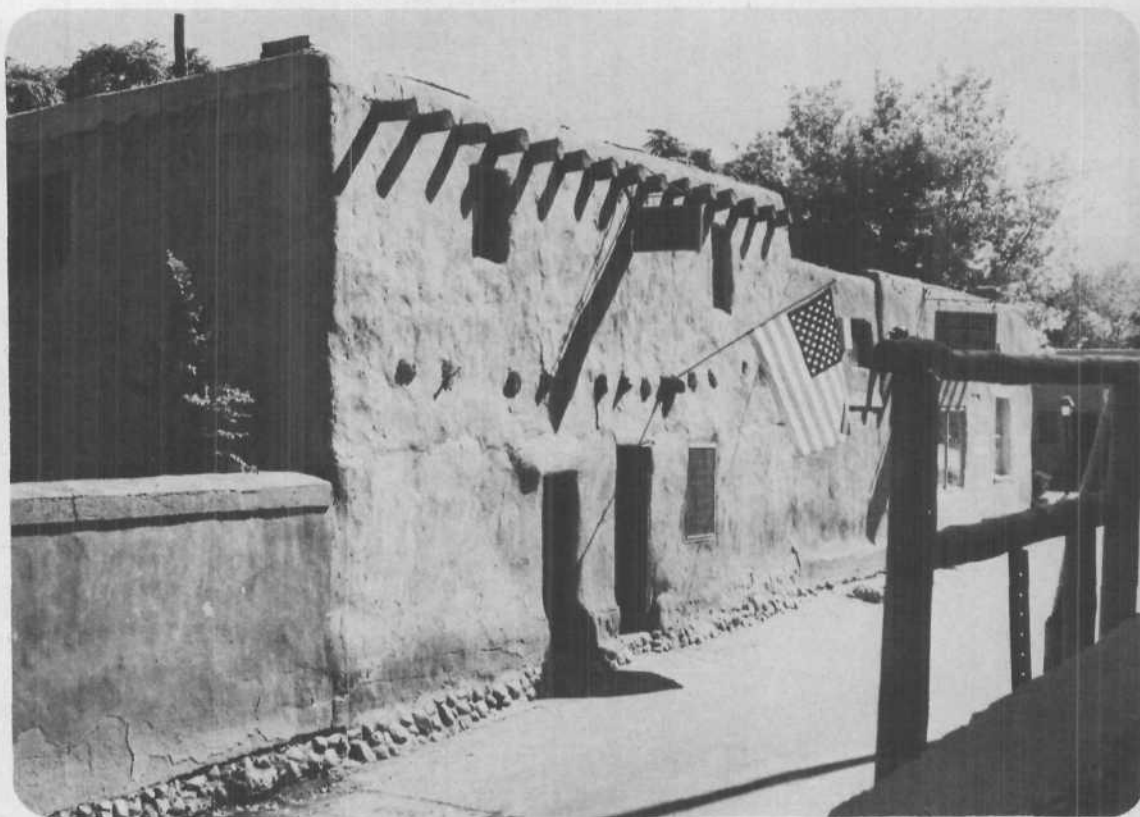
10:30 a.m.—CONDUCTED TOUR. Tour to South Valley points. Starts at sign on main road, north of Visitors' Center, your car.

7:00 p.m.—NATURALIST TALK, Museum and Visitors' Center Auditorium.

SPECIAL EVENTS — DESERT ART SHOW, Museum and Visitors' Center. An Invitational and an Open Show featuring noted and typical desert art. You can vote for your favorite oil and watercolor painting. Opens 10:15 a.m. Friday, November 9, and continues through Sunday, November 11. Sunday hours will be from 10:15 a.m. to 12 Noon only.

*The pueblo of
Analco, of which
oldest house is the
last remnant,
was presumably
built about
1,200.*

by
Grover
Brinkman



OLDEST HOUSE IN AMERICA

ABOUT THE year 1,200 — predating Santa Fe, New Mexico's earliest white settlement — the Pueblo of Analco occupied much of the area on the south side of the river that gave the city its name. What is now called the Oldest House in America was presumably the last remnant of this ancient pueblo.

Most of Santa Fe's historic landmarks are located in a small area surrounding the ancient plaza, which is still the hub of the city much as it was in the days of the early Indians and Spaniards. A capital for more than 300 years, the flags of four nations—Spain, Mexico, the Confederacy and the United States — have flown over its ancient Palace of Governors. Santa Fe started life in 1609 with the florid title of the Royal City of the Holy Faith of Saint Francis.

Recent excavations under Santa Fe's oldest church, San Miguel Mission, di-

rectly across narrow Canyon Road from its Oldest House, reveal pottery fragments belonging to the years 1100-1200. This predates the time these Indians were driven west across the Rio Grande valley to the cliff dwellings of Puye and Frijoles on the Pajarito Plateau.

The lower walls of the Oldest House are of the original construction—puddled adobe, indisputable testimony to its age (Adobe bricks and corner fireplaces were used only after the Spanish came in 1540.)

The ceilings of the lower rooms show the original entrances were through the roofs, in the Indian manner. Tree-ring dates, more indisputable evidence, indicates that a large part of the Oldest House is contemporary with the main part of the San Miguel Mission next door.

Perhaps the fact that Santa Fe has never been an industrial city of any consequence is one of the reasons its ancient ruins are

so well guarded and preserved. The narrow alleys of the ancient Indians and early Spaniards are unchanged. No interstate highways or wide thoroughfares destroy the magic of the ancient part of town called Old City. History deepens, instead of dims, in these historic streets. Once famed Billy the Kid sat in chains here awaiting trial; it is easy to envision the scene today. Such is the authenticity of old town.

As early Spaniards quartered their slaves in houses to the south side of the river, the Oldest House may well have been used for this purpose. Some historians insist that San Miguel, across the street, was first a mission for the slaves of these Spanish aristocrats.

Somehow the Oldest House was one of the few buildings to escape the bloody uprising of 1630 when the Indians revolted against the Spanish. This, too, strengthens

the belief of many historians that the house was spared because of its Indian origin.

Being prehistoric, there are no written records of the people who originally lived in the Oldest House from its building up to the years prior to 1600. From pottery fragments found here, it has been established that the Pueblo of Analco was contemporary with Kwapoge, which stood on the site of the present Fort Marcy ruins north of the city.

It was part of a vast Pueblo culture indicative to the region. The first contact with Indians here was made by the Spanish Conquistadores in 1540. The eighteen pueblos in New Mexico today, from Taos to below Albuquerque and along the old Coronado Trail westward from Isleta to Zuni, bear many resemblances to the first floor construction in the Oldest House.

Without doubt, the first inhabitants of the Oldest House were farmers who in the spring prayed for rain and planted their prayer-sticks in the fields. The women then, as now, went barefoot believing that fertility was drawn from the earth, assuring them healthy babies. The men were pioneers in irrigation which, in view of the comparative aridity of their land, was a necessity. Before the coming of the Spaniards, their crops were confined to maize, beans, squash and cotton. They had no domesticated mammal save the dog, and the turkey was their only domesticated fowl.

Although masters of ceramics, they never knew the potter's wheel, but built their jars and bowls from a small molded base by means of clay coils, obliterated after the desired form was determined. The pottery was decorated, polished and fired in open kilns.

The Pueblos who first lived in the Oldest House were monogamous. Marriages were not permitted between members of the same clan. They were a peaceful people closely attuned to nature.

Concerning the Oldest House, the first records itemizing its antiquity are those of the early Franciscan Fathers. Soon afterwards came the treasure hunters, the traders, the pioneers, but they were not record keepers.

Santa Fe, even today, is a town of many fireplaces. Around these pinyon fires on winter nights are still related the legends of the witch sisters who lived here, with their bundles of owl feathers hanging from the vigas, with dried toads and cat's eyes tucked away in wall crevices. The passion, revolt, tragedy and culture of several cultures are recorded here.

There is a feeling of great age and charm that one senses very quickly. The quaint, narrow streets and the brown adobe houses are thick with deeds and memories of revolt, and even death, as cultures clashed. It is a community of patios where hollyhocks nod, where towering cottonwoods spatter shade and remind one of hanging parties long past. Crumbling gateways show ancient walls whose original adobe bricks peep through the broken earthen plaster, to present indisputable testimony of great age. The bricks are still there, but the brown hands which fashioned them are long gone back to their original dust.

Sixteen miles from the main line of a railroad, Santa Fe nestles in the valley of the Rio de Santa Fe where it emerges from the foothills of the Sangre de Cristos on the East. To the South are the Sandias; the Jemez range is to the West. Entirely surrounded by these snow-capped peaks, in a land of vast distances and deep colors, Santa Fe from ancient times has been a magnet for people who worshipped the sun. The average rainfall is 14.34 inches. Year-round temperatures average 48.9 degrees in winter, 68.7 in summer, all in favor of its early Pueblo culture.

The Santa Fe Trail came at last, terminating here. The bull-whips added explosive sounds to the town square. The bull-whackers of the caravans rubbed noses with Spanish women in black shawls, caroused at night in the saloons and traded with the Indians from many nearby pueblos. Nowhere in the U. S. is there a fuller blend of distinct cultures.

So the Oldest House and the oldest church fittingly survive in a town of ancient heritage and charm, much of its early history lost in antiquity, its puddled adobe cracked and hardened by centuries of time, its silent walls mute testimony to a culture that predated the white man, and thrived here far better before he came. ☐

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Rambling on Rocks

by
Glenn and Martha Vargas

FOOL'S GOLD: The Eternal Deceiver

GOLD is undoubtedly the one mineral
that has the most universal appeal.
Many people, upon finding that we are
mineral collectors and do not look for
gold, think that there is something wrong
with us. "Go out in the desert and not
look for gold?" is their usual answer of
incredulity.

Many of this same type of person has
come to us with a specimen—"Something
we found out by an old mine; is it gold?"

The location is always remote and nebu-
lous. The specimen without fail turns out
to be pyrite—better known as "fool's
gold." After a short period of deflation,
it is quite easy for us to learn the loca-
tion, it is usually an abandoned mine, not
far away.

If one can conceive of Mother Nature
being capricious, then one is led to the
conclusion that fool's gold is a sort of
joke palmed off on gold hungry humans.
Whether or not she is capricious, or if
the whole thing is a prank, nevertheless,
the resemblance of this deceiver to gold
becomes a joke, and at times a grim one.

More than one mineral masquerades as
gold, but the most common, and by far
the most "popular," is pyrite. This com-
mon mineral is iron sulfide, and nature
endowed it with a color very close to that
of gold. Its metallic constituent has led
to a slight misnomer—iron pyrite. Just
pyrite is sufficient.

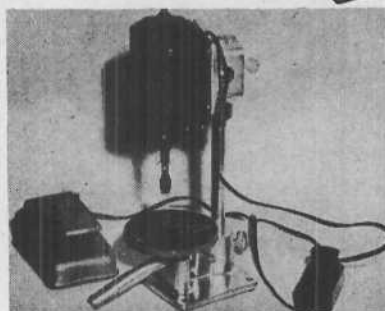
The color is somewhat brassy, but very
close. Pyrite does not readily alter and
change color, so that any piece will re-
semble gold throughout, making it all
the easier for the neophyte to make his
well-known mistake.

Color is not the only resemblance of
pyrite to gold. Pyrite is heavier than most
minerals. Certainly, it has nowhere near
the specific gravity of gold, but just the
fact that it is, or seems heavier, than
other minerals will stir the thoughts of
riches.

There is one more similarity, both
form crystals that are cubes. We really
do not feel that it is a good similarity, as
gold crystals are very rare and, when
found, they are very small. Pyrite, on the
other hand, usually forms good-sized crys-
tals. Greater than an inch across is not
rare, and we have seen crystals up to eight
inches.

There are differences, and these should

P.D.Q.

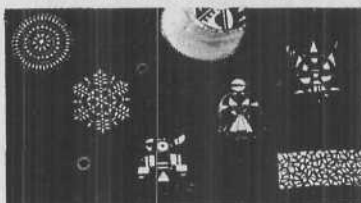


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be in the mind of the casual gold seeker. Gold is what the metallurgist calls malleable, it will easily scratch, but will not chip. It is soft, and any sharp instrument will leave a furrow with the displaced metal remaining as ridges on either side of the scratch. Small pieces are difficult to remove.

Pyrite is vastly different when scratched. It is brittle, and small chips will break off during the scratching. Instead of the smooth, nearly oiled, feeling with scratching gold, pyrite gives a feeling of roughness.

Gold seldom has a lustrous shine in nature, but is dull yellow, the result of much abrasion if it has been exposed to weather or erosion. Pyrite often breaks with a smooth fracture, and the fracture surface is brilliant. Gold simply does not break!

Pyrite has a near relative, chalcopryrite, a copper-iron sulfide, that is also guilty of leading people astray. It is usually brassy only when freshly broken, soon altering to bluish or purplish. It appears to be a simple thing to completely disregard the blue and purple and see only the gold color, especially on the surface of a fresh break.

Pyrite and chalcopryrite take their toll only around old mines, rock outcrops and the like. Seldom have these two led anyone astray when they were in a stream of water. The reason is simple—these two minerals, being brittle, quickly break down to very fine particles when they are moved by a stream. Gold, with its malleability, becomes rounded into a nugget.

The stream may contain a deceiver also. Here it is one that would never be suspected on dry land—mica. There are a number of micas, each having a different color and habitat. The deceiving mica is biotite, in reality it is black. In very small flakes, it loses the blackness, and under

water takes on a gold color. We will discuss the mica in a future column.

Under water, gold sinks rapidly to the bottom—it is much heavier than pure water. If pure, it is 19 times heavier; if impure, it may be only 15 times heavier. At the same time, it is three or more times heavier than most rocks, so that the slightest agitation will make gold sink to the bottom of gravel in water. The gold panning miner takes advantage of this characteristic when he pans for gold.

Mica is much lighter than gold, lighter than many rocks, so it never sinks through gravel under any circumstances. This lightness, coupled with a flakiness, assists it in playing the deceiving game. During panning for gold, the mass of gravel is swished and shaken in the pan to get the gold to sink. Then a layer of gravel at the top is scraped off the pan. More shaking, followed with more of the top being scraped off, will finally remove nearly all the gravel, but retain the gold. Mica has a habit of being missed during the scraping portion. The flat plates are easily caught in crevices between the remaining gravel, or it simply floats aside in the water. When virtually all the gravel is removed from the pan, a number of flakes of mica are sure to remain.

If there is gold in the pan, it lies firmly on the bottom, moving only with extra agitation, and will lie under any remaining gravel. Mica will move freely with the water, lying above the gravel. If there is no gold in the pan (the usual situation), any mica will immediately cause that glint in the eye.

There is virtually no one that is interested in finding gold, that has not heard some story of another being fooled by fool's gold. Surprisingly, these same individuals are ripe prospects to be the next in line. Certainly, it is the eternal deceiver. ☐



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Statement of ownership, management and circulation (Act of August 12, 1970: Section 3685. Title 39. United States Code).

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Incident of Memory

Continued from Page 27

Manly and Roger walked in silence, protecting their throats against dry desert breezes. As they trod the canyons, climbed the ridges—the hours turned into days. Their passage opened into a broad valley—significant only for the stripped butte rising majestically above the floor. For orientation, the two scaled a barren, talus-covered peak. The view was awesome. To the east, the cursed country they had passed, and the west, more desolation—no fertile valley spread below. A decision must be made. The ten days travel period was a grave error. However, to return without aid would mean certain disaster for those who waited. They must seek help!

Westward they trudged—day after day. A 30-foot dry fall, and other obstacles were encountered, and overcome. Under such stress, their bodies devitalized from lack of water. The tendinous dry meat was rejected by their throats, now too dry to swallow. When death seemed imminent, Rogers found slivers of ice clinging to scrub plants, in a pre-dawn search.

The sun glistening on the water of today's Searles Lake proved wasted time and energy when the water was found not fit to drink. A similar incident was avoided at the next sighting of a lake. This one, near Trona, had a bottom red as wine, and strong with alkali, making it slippery to the touch. Indications that the Jayhawkers had passed this way were evidenced by holes in the sand that had been dug in search of water.

Traveling west, the two men passed what we know today as China Lake, and Red Rock Canyon, then on through the central part of Mojave Desert. After 26 days of pushing almost beyond human endurance, their eyes beheld pasture land and the sound of fresh water—then the sight of human habitation.

Preparations for the return trip were made near the Mission of San Fernando. No time was wasted. Wagons, they knew, must be left behind—in their place, animals must be provided the women and children. Flour, beans, and good dried beef were packed aboard a little "one-eyed" mule and the horses. Even before they had fully regained their strength, Manly and Rogers again entered the hostile land—still hopeful of the rescue of

those who counted on them to return.

The return trip was not made without incident. Thirst, and lack of feed for the horses weakened the animals after the first few days out. Try as they may, the horses would not climb the narrow walk they had built to the top of the dry fall—now known as Manly Falls. The little mule scampered up with its load. The horses had to be left behind, facing certain death.

Finally, Manly, Rogers, and the little mule stood looking down upon the encampment they left so many days before. Only four of the seven wagons remained, and the covers had been stripped from these. There was no sign of life. Their first thoughts were of Indians—perhaps they were still near. Manly raised his gun, and shot into the air—they waited. Slowly, from beneath a wagon, life stirred—a man stood up and looked around. When he spotted the men, he let out a cry, "The boys are back!" More heads appeared, then people moved up the canyon—rejoicing was spontaneous. With the calm, came the questions—the story unfolded. Manly told them that 250 miles of misery and suffering lay ahead. Wagons must be left behind, and only the bare essentials could be carried.

Nourishment and sound sleep escalated plans. The oxen were still poor—their skin lay loose over skeleton frames. Nevertheless, they must bear the burdens—both people and supplies. Harnesses were made from old wagon covers, and two strong hickory shirts were fashioned into pouches to hold the smaller children.

The morning of departure, Mrs. Arcane appeared in all her city finery. Layer upon layer of fancy dresses, and atop her head, a stack of ribbon-decked hats—she could not bear to part with them. She boarded her ox, as did Mrs. Bennett. Old Crump, a bridle ox, transported the children in their pouches—the men walked and led the burden animals.

The first few miles gave everyone confidence. Then, without warning, the load slipped on the lead ox. He bawled and kicked, to rid the pack. The commotion spooked the other animals, each in turn dismounting their riders. Mrs. Arcane, in fear of soiling her finery, was the last to give up. As she bounced her ribbons streamed gaily behind her. The impromptu circus resulted in the first spontaneous laughter in many weeks. The day was lost

—consumed in mending harnesses.

A more experienced party continued the next day. Manly had mapped the trail on the previous trip. He avoided strenuous peaks, and he and Rogers moved ahead to have camp prepared when the women and children arrived at nightfall.

Bennett and Arcane chose to climb the mountain to see the awesome view that Manly had told them about. Their feelings were much the same as they looked back over their valley of imprisonment, and ahead to the unknown. Their feelings were expressed in the phrase, "Good-bye Death Valley."

One more obstacle was behind them when they lowered the people down the dry fall. The oxen were shoved, one by one—landing safely on a pile of sand mound-ed below. As they traveled on, each prayed that none would be left behind in this land where there was not even enough soil for a decent burial.

As the oxen were killed for food, the hides were cut and fashioned into moc-casins—for both people and animals needs. By now, feet were so bruised and cut it was difficult to know which foot to limp on.

In spite of serious doubt, the ordeal finally came to an end. Ground cover grew greener, and then came the sound of fresh water passing over rock—cool clean water. They drank, and refreshed themselves for the first time in more than 20 long days.

March, 1850, the party arrived at the settlement where Manly and Rogers had started their return trip. Los Angeles, now just three days travel away, seemed an answer to many silent prayers.

The streets of the Pueblo de Los Angeles were dusty, and the small train of tattered people attracted the attention of all those in the streets. Old Crump still carried the children, while the others, in spite of fatigue, marched along together. The fringed skirt of Mrs. Bennett, now worn off above her knees, exposed the curious rawhide moccasins, and her hair hung dirty and in tangles. The city finery of Mrs. Arcane now hung in tatters, the brilliant colors faded and soiled.

However, with all their remaining energy the small train walked with pride—for they had faced the ordeal of Death Valley, and whatever their motivations, the incident had passed, an incident that could not be committed to memory. □

Letters to the Editor

Letters requesting answers must
include stamped self-addressed envelope.

Trona Pinnacles . . .

The article and pictures in the September, 1973 *Desert Magazine* on the Trona Pinnacles is very good. However, I would like to point out to your readers that the Trona Pinnacles were made into a Natural History Landmark in October, 1967. It is against the law to break apart or remove any part of the pinnacles.

It has taken millions of years for them to form and they have been there a long time, and we people from Trona insist that the pinnacles be preserved as they are. There is a large fine for breaking or removing any part of the pinnacles. Visitors are always welcome. Please come and look, but leave your picks and hammers in your car.

MRS. T. B. GIBSON,
Trona, California.

Where is Nell? . . .

The October, 1973 issue has mentioned the ghost towns of Peace and Austin, reminding me of the "Roving Reporter of the Desert," Nell Murbarger, whose books and articles I read so avidly.

Could you tell me anything about her, as I am a Murbarger fan as well as a *Desert Magazine* fan.

ELEANOR HOLTSCHLAG,
La Mesa, California.

Editor's Note: Nell has retired now, but still corresponds with her Desert friends. Two of her books, "30,000 Miles in Mexico" and "Ghosts of the Glory Trail" are still in print and available through our book shop.

Colorado River Mystery . . .

While gathering material for an article on the recreational area of California's Riverside County and the Colorado River, I found this object on a small hill on the California side of the river.

Made of heavy cast iron and embedded in a large concrete base, it is about four feet high. The circular part on the bottom is a two-pronged pulley-type wheel. The steel cable is about 30 feet long and ends at the bottom of the hill. The cable may not have been part of the original object, but rather used by someone who was attempting to remove the cast iron object.

It has been suggested the object may have been an anchor or pulley to hold river boats. I have shown the photos to several old-timers, however, who could not identify the object. Maybe a *Desert* reader might know.

JACK PEPPER,
Palm Desert, California.



Calendar of Events

NOVEMBER 3 & 4, 13TH ANNUAL GEM AND MINERAL SHOW sponsored by the Twentynine Palms Gem and Mineral Society. Hayes Auditorium, Intermediate School, Utah Trail, Twentynine Palms, Calif. Dealers. Free admission. Chairman: Mrs. Rhoda Carlton, P.O. Box 505, Twentynine Palms, Calif. 92277.

NOVEMBER 3 & 4, ANNUAL ROCK AND MINERAL SHOW, sponsored by the Bear Gulch Rock Club, Masonic Hall, 1025 N. Vine Ave., Ontario, Calif. Exhibits, dealers. Admission free. Mary Pearson, chairman, 7178 Agate St. Alta Loma, Calif. 91701.

NOVEMBER 3 & 4, ELEVENTH ANNUAL SAN DIEGO COUNTY ROCKHOUND GEMBOREE sponsored by the Council of the San Diego County Gem & Mineral Societies, Scottish Rite Masonic Memorial Center, 1895 Camino Del Rio South, San Diego, Calif. Chairman: Elmer Schmitt. Dealer Chairman: Mrs. Marian Horensky.

NOVEMBER 3 & 4, "GOLDEN HARVEST OF GEMS AND MINERALS" sponsored by the Sacramento Mineral Society, Scottish Rite Temple, 6151 H St., Sacramento, Calif. Exhibits of gems, minerals, crystals, handcrafted jewelry, dealers and demonstrations.

NOVEMBER 8 - 11 1973 DEATH VALLEY ENCAMPMENT, in the Stovepipe Wells and Furnace Creek areas of the National Monument. Hotel accommodations limited, so plan to "camp under the desert stars." Campfire meetings, historical talks, guided tours and exhibits of gems, minerals, desert art and photographs. For further information contact.

NOVEMBER 10, OPEN HOUSE at the new home of the Research Center for the Study of Early Man of the Archeological Survey Association of Southern California, 1251 Palomares St., La Verne, Calif.

NOVEMBER 10 & 11, GEM & MINERAL SHOW sponsored by the Montebello Mineral Lapidary Society, Masonic Lodge, 6310 East Olympic Blvd., East Los Angeles, Calif. Dealers and free demonstrations. Free specimens to teachers, students and scouts.

NOVEMBER 11 & 12, 'FANTASY IN GEMS', 7th Biennial show sponsored by the San Gabriel Valley Lapidary Society, Arcadia Masonic Temple, 50 W. Duarte Rd., Arcadia, Calif. Guest exhibitors and demonstrations.



Photo by George Service

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T835 Christmas Foal—With Best Wishes for Christmas and the New Year—Goodwine



T817 The Night Before Christmas—Best Wishes for a Merry Christmas and Happy New Year—Mitchell



T738 Take Time To See (24 line poem)—Merry Christmas and Happy New Year—Lowdermilk



T825 The Little Indian Drummer Boy—May Christmas bring the music of laughter, etc.—EchoHawk



T823 Gambel's Quail Family—May the Peace and Joy of Christmas be with you, etc.—Van Howl



T748 The Warm Winds of Heaven—Peace and Good Will at Christmas, etc.—Lewis



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